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(FILE 'REGISTRY' ENTERED AT 07:53:14 ON 08 AUG 2000)

DEL HIS  
ACT CRANE363A/A

L1 1 SEA FILE=REGISTRY ABB=ON PLU=ON 58-96-8

ACT CRANE363B/A

L2 ( 16)SEA FILE=REGISTRY ABB=ON PLU=ON (563-24-6/BI OR 5909-45-5/BI  
L3 ( 1)SEA FILE=REGISTRY ABB=ON PLU=ON 58-96-8  
L4 ( 1)SEA FILE=REGISTRY ABB=ON PLU=ON 9030-22-2  
L5 ( 14)SEA FILE=REGISTRY ABB=ON PLU=ON L2 NOT (L3 OR L4)  
L6 ( 4)SEA FILE=REGISTRY ABB=ON PLU=ON 62-49-7 OR 67-48-1 OR 87-67-2  
L7 ( 2)SEA FILE=REGISTRY ABB=ON PLU=ON 563-24-6 OR 987-78-0  
L8 ( 3)SEA FILE=REGISTRY ABB=ON PLU=ON 35898-87-4 OR 54-03-5 OR 5983  
L9 ( 5)SEA FILE=REGISTRY ABB=ON PLU=ON L5 NOT (L6 OR L7 OR L8)  
L10 ( 4)SEA FILE=REGISTRY ABB=ON PLU=ON L9 NOT C9H11NO3  
L11 ( 3)SEA FILE=REGISTRY ABB=ON PLU=ON L10 NOT 65-46-3  
L12 12 SEA FILE=REGISTRY ABB=ON PLU=ON (L6 OR L7 OR L8 OR L11)

FILE 'EMBASE' ENTERED AT 07:54:40 ON 08 AUG 2000

L13 2023 S L1  
L14 2457 S URIDINE/CT OR URIDINE DERIVATIVE/CT  
L15 2457 S L13, L14  
L16 19386 S URIDINE DERIVATIVE+NT/CT  
L17 16929 S L16 NOT L15  
L18 8059 S L12  
L19 7914 S (CHOLINE OR CHOLINE DERIVATIVE OR CITICOLINE OR DILAZEP OR HE  
L20 16011 S (PHOSPHATIDYLCHOLINE OR LYSOPHOSPHATIDYLCHOLINE OR GLYCEROPHO  
L21 0 S BENZYLBARBITURATE OR BENZYL BARBITURATE  
L22 0 S BENZENE BARBITURATE  
L23 147653 S FATTY ACID+NT/CT  
L24 7265 S LECITHIN OR LYSOLECITHIN  
L25 803 S CDP CHOLINE OR ACYLGLYCEROPHOSPHOCHOLINE OR ACYL GLYCEROPHOSP  
L26 42 S CYTIDINE DIPHOSPHOCHOLINE  
L27 1 S CYTIDINE DIPHOSPHO CHOLINE  
L28 96 S L15 AND L18-L27  
L29 108 S L15 AND (NEUROLOGIC DISEASE+NT OR MEMORY+NT OR NIEMANN PICK D  
L30 2 S L15 AND (ATTENTION+NT OR ATTENTION DEFICIT DISORDER OR SELECT  
L31 26 S L15 AND (BEHAVIOR+NT OR BEHAVIOR DISORDER+NT OR EMOTION+NT OR  
L32 21 S L15 AND (PANIC OR ANXIETY OR ANXIETY NEUROSIS+NT OR TRANQUILI  
L33 37 S L15 AND (TARDIVE DYSKINESIA OR THROMBOSIS+NT OR HYPOXIA+NT OR  
L34 138 S L15 AND (BRAIN+NT OR BRAIN ATROPHY OR BRAIN INJURY+NT OR BRAI  
L35 14 S L15 AND (SPINAL CORD+NT OR SPINAL CORD INJURY+NT OR SPINAL CO  
L36 7 S L15 AND (POSTPOLIOMYELITIS SYNDROME OR POLIOMYELITIS OR POLIO  
L37 5 S L15 AND (NEUROMUSCULAR FUNCTION+NT OR NEUROMUSCULAR DISEASE+N  
L38 225 S L15 AND (NERVOUS TISSUE+NT OR NERVOUS SYSTEM+NT OR NERVOUS SY  
L39 298 S L29-L38  
L40 198 S L14/MAJ AND L39  
L41 13 S L28 AND L40

L42 183 S L15 AND A8./CT  
 L43 77 S L15 AND (F1. OR F2. OR F3. OR F4.)/CT  
 L44 162 S L15 AND (G2.600. OR C2.610. OR C6.450.610.)/CT  
 L45 31 S L15 AND A10.600./CT  
 L46 310 S L42-L45,L39  
 L47 205 S L46 AND L14/MAJ  
 L48 1123 S L15 AND (E2.230. OR G1.680. OR E5.20.240.)/CT  
 L49 359 S L14(L) (CT OR AD OR CB OR CM OR CR OR DV OR DO OR DT OR PR OR  
 L50 3300 S L16(L) (CT OR AD OR CB OR CM OR CR OR DV OR DO OR DT OR PR OR  
 L51 271 S L49 AND L14/MAJ  
 L52 38 S L51 AND L39,L46  
 L53 38 S L52 AND L48  
 L54 38 S L52,L53  
 L55 2 S L28 AND L54  
 L56 258 S L51 AND PY<=1998  
 L57 36 S L54 AND L56  
 L58 13 S L57 NOT AB/FA  
 L59 23 S L57 NOT L58

FILE 'EMBASE' ENTERED AT 08:33:58 ON 08 AUG 2000

=> d all tot 158

L58 ANSWER 1 OF 13 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.  
 AN 97271841 EMBASE  
 DN 1997271841  
 TI [How to get a grip on alcohol neuropathies].  
 WIE DIE ALKOHOOL-NEUROPATHIE IN DEN GRIFF ZU KRIEGEN IST.  
 AU Filip K.B.  
 SO Zeitschrift fur Allgemeinmedizin, (1997) 73/9 (527).  
 ISSN: 0341-9835 CODEN: ZALMAS  
 CY Germany  
 DT Journal; Conference Article  
 FS 008 Neurology and Neurosurgery  
 037 Drug Literature Index  
 LA German  
 CT Medical Descriptors:  
 \*alcoholism  
 \*polyneuropathy: DT, drug therapy  
 conference paper  
 drug efficacy  
 human  
 Drug Descriptors:  
 \*benfotiamine: DT, drug therapy  
 \*cytidine: DT, drug therapy  
 \*pyridoxine: DT, drug therapy  
 \*thiamine: DT, drug therapy  
 \*uridine: DT, drug therapy  
 keltican  
 neurotrat  
 vitamin b complex  
 unclassified drug  
 RN (benfotiamine) 22457-89-2; (cytidine) 65-46-3; (pyridoxine) 12001-77-3,  
 58-56-0, 65-23-6, 8059-24-3; (thiamine) 59-43-8, 67-03-8; (uridine)  
 58-96-8; (neurotrat) 55015-09-3  
 CN Neurotrat; Milgamma; Keltican  
  
 L58 ANSWER 2 OF 13 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.  
 AN 96238329 EMBASE  
 DN 1996238329  
 TI [Polyneuropathies: New study on drug therapy of alcoholism].  
 POLYNEUROPATHIEN: NEUE STUDIE ZUR AM-THERAPIE.  
 AU Dietz G.  
 SO Pharmazeutische Zeitung, (1996) 141/32 (53).  
 ISSN: 0031-7136 CODEN: PZSED5

CY Germany  
DT Journal; Note  
FS 008 Neurology and Neurosurgery  
040 Drug Dependence, Alcohol Abuse and Alcoholism  
030 Pharmacology  
037 Drug Literature Index  
LA German  
SL German  
CT Medical Descriptors:  
\*alcoholism: DT, drug therapy  
\*polyneuropathy: DT, drug therapy  
clinical trial  
human  
major clinical study  
note  
Drug Descriptors:  
\*benfotiamine: DT, drug therapy  
\*cytidine: DT, drug therapy  
\*nucleotide: DT, drug therapy  
\*pyridoxine: DT, drug therapy  
\*thiamine: DT, drug therapy  
\*uridine: DT, drug therapy  
RN (benfotiamine) 22457-89-2; (cytidine) 65-46-3; (pyridoxine) 12001-77-3,  
58-56-0, 65-23-6, 8059-24-3; (thiamine) 59-43-8, 67-03-8; (uridine)  
58-96-8

L58 ANSWER 3 OF 13 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

AN 93024387 EMBASE  
DN 1993024387  
TI [Nucleotides against low back pain].  
NUKLEOTIDE GEGEN KREUZSCHMERZEN.  
SO TW Neurologie Psychiatrie, (1992) 6/12 (797).  
ISSN: 0935-3224 CODEN: TWNPE3

CY Germany  
DT Journal; Note  
FS 008 Neurology and Neurosurgery  
024 Anesthesiology  
037 Drug Literature Index

LA German  
CT Medical Descriptors:  
\*low back pain: DT, drug therapy  
\*myopathy: DT, drug therapy  
\*polyneuropathy: DT, drug therapy  
drug mixture  
human  
note  
Drug Descriptors:  
\*cytidine: DT, drug therapy  
\*cytidine: CB, drug combination  
\*nucleotide: DT, drug therapy  
\*uridine: DT, drug therapy  
\*uridine: CB, drug combination  
keltican: DT, drug therapy  
unclassified drug  
RN (cytidine) 65-46-3; (uridine) 58-96-8  
CN Keltican

L58 ANSWER 4 OF 13 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

AN 92246061 EMBASE  
DN 1992246061  
TI Treatment of diabetic polyneuropathy.  
AU Jakobsen J.  
CS Odense University Hospital, Odense, Denmark  
SO Acta Neurologica Scandinavica, (1992) 86/1 (1-2).  
ISSN: 0001-6314 CODEN: ANRSAS  
CY Denmark

DT Journal; Editorial  
FS 008 Neurology and Neurosurgery  
030 Pharmacology  
037 Drug Literature Index  
038 Adverse Reactions Titles  
LA English  
CT Medical Descriptors:  
\*diabetes mellitus: TH, therapy  
**\*diabetes mellitus: DT, drug therapy**  
**\*diabetic neuropathy: ET, etiology**  
**\*diabetic neuropathy: DT, drug therapy**  
editorial  
human  
liver toxicity: SI, side effect  
nonhuman  
**oral drug administration**  
priority journal  
rash: SI, side effect  
Drug Descriptors:  
**\*aldehyde reductase: DT, drug therapy**  
**\*insulin: DT, drug therapy**  
**\*ponalrestat: DT, drug therapy**  
**\*sorbinil: DT, drug therapy**  
\*sorbinil: AE, adverse drug reaction  
**\*tolrestat: DT, drug therapy**  
**\*uridine: DT, drug therapy**  
RN (aldehyde reductase) 58591-34-7, 9023-11-4, 9028-31-3; (insulin)  
9004-10-8; (ponalrestat) 72702-95-5; (sorbinil) 68367-52-2; (tolrestat)  
82964-04-3; (uridine) **58-96-8**

L58 ANSWER 5 OF 13 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.  
AN 91232207 EMBASE  
DN 1991232207  
TI Synthesis of brain-targeted 5-iodo, 5-vinyl- and (E)-5-(2-iodovinyl)-2'-  
deoxyuridines coupled to a dihydropyridine .dblarw. pyridinium salt redox  
chemical delivery system.  
AU Kumar R.; Ji G.; Wiebe L.I.; Knaus E.E.  
CS Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta,  
Edmonton, Alta. T6G 2N8, Canada  
SO Journal of Heterocyclic Chemistry, (1991) 28/3 (711-715).  
ISSN: 0022-152X CODEN: JHTCAD  
CY United States  
DT Journal; Article  
FS 037 Drug Literature Index  
LA English  
CT Medical Descriptors:  
\*drug synthesis  
article  
**blood brain barrier**  
**drug targeting**  
Drug Descriptors:  
\*antivirus agent: AN, drug analysis  
\*antivirus agent: DV, drug development  
**\*uridine derivative: AN, drug analysis**  
**\*uridine derivative: DV, drug development**

L58 ANSWER 6 OF 13 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.  
AN 91130550 EMBASE  
DN 1991130550  
TI The treatment of diabetic foot.  
AU Schaper C.  
CS Ermelestrasse 6, 7450 Hechingen, Germany  
SO Zeitschrift fur Allgemeinmedizin, (1991) 67/6 (346).  
ISSN: 0341-9835 CODEN: ZALMAS  
CY Germany  
DT Journal; Note

FS 003 Endocrinology  
006 Internal Medicine  
037 Drug Literature Index  
LA German  
CT Medical Descriptors:  
\*diabetes mellitus  
**\*diabetic neuropathy: ET, etiology**  
**\*diabetic neuropathy: DT, drug therapy**  
\*foot  
human  
note  
prophylaxis  
Drug Descriptors:  
**\*cobalamin: DT, drug therapy**  
**\*cytidine: DT, drug therapy**  
**\*prostaglandin e1: DT, drug therapy**  
**\*uridine: DT, drug therapy**  
benfotiamine  
prostavasin  
RN (cobalamin) 13408-78-1; (cytidine) 65-46-3; (prostaglandin e1) 745-65-3;  
(uridine) **58-96-8**; (benfotiamine) 22457-89-2; (prostavasin)  
55648-20-9  
CN Prostavasin; Benfotiamine

L58 ANSWER 7 OF 13 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.  
AN 91113095 EMBASE  
DN 1991113095  
TI Pharmacological analysis of uridine anxiolytic activity.  
AU Karkishchenko N.N.; Khaitin M.I.; Simkina Yu. N.  
CS Laboratory of Molecular Pharmacology, Research Institute of Physical and  
Organic Chemistry, State University, 194/3, prospekt Stachki,  
Rostov-na-Donu 344104, Russia  
SO Farmakologiya i Toksikologiya, (1991) 54/1 (16-18).  
ISSN: 0014-8318 CODEN: FATOAO  
CY Russia  
DT Journal; Article  
FS 030 Pharmacology  
037 Drug Literature Index  
LA Russian  
SL English  
CT Medical Descriptors:  
**\*tranquilizing activity**  
animal experiment  
article  
mouse  
nonhuman  
**serotonergic system**  
Drug Descriptors:  
**\*cyproheptadine: PD, pharmacology**  
**\*haloperidol: PD, pharmacology**  
**\*prazosin: PD, pharmacology**  
**\*propranolol: PD, pharmacology**  
**\*uridine: PD, pharmacology**  
RN (cyproheptadine) 129-03-3, 969-33-5; (haloperidol) 52-86-8; (prazosin)  
19216-56-9, 19237-84-4; (propranolol) 13013-17-7, 318-98-9, 3506-09-0,  
4199-09-1, 525-66-6; (uridine) **58-96-8**

L58 ANSWER 8 OF 13 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.  
AN 90300713 EMBASE  
DN 1990300713  
TI Chronic but not acute uridine treatment reduces haloperidol-induced  
dopamine release in neostriatum as studied by intracerebral microdialysis.  
AU Ruggeri M.; Zoli M.; Ungerstedt U.; Peruzzi G.; Agnati L.F.; Fuxe K.  
CS Institute of Human Physiology, University of Modena, Italy  
SO Neuroscience Research Communications, (1990) 6/3 (187-192).  
ISSN: 0893-6609 CODEN: NRCOEE

CY United Kingdom  
DT Journal; Article  
FS 037 Drug Literature Index  
002 Physiology  
LA English  
CT Medical Descriptors:  
\*corpus striatum  
\*dopamine release  
\*microdialysis  
rat  
animal experiment  
nonhuman  
male  
intraperitoneal drug administration  
article  
Drug Descriptors:  
\*dihydroxyphenylacetic acid  
\*haloperidol: CB, drug combination  
\*uridine: PD, pharmacology  
\*uridine: CB, drug combination  
RN (haloperidol) 52-86-8; (uridine) 58-96-8  
CN (1) Serenase  
CO (1) Istituto lusofarmaco (Italy)

L58 ANSWER 9 OF 13 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.  
AN 90294377 EMBASE  
DN 1990294377  
TI Hypnotic and sedative activities of N3-substituted uridine, thymidine and  
azauridine, and their action mechanism.  
AU Yamamoto I.; Watanabe K.; Koshigami M.; Furuta E.; Tateoka Y.; Kimura T.;  
Ho I.K.  
CS Department of Hygienic Chemistry, Faculty of Pharmaceutical Sciences,  
Hokuriku University, 3-Ho Kanagawa-machi, Kanazawa 920-11, Japan  
SO European Journal of Pharmacology, (1990) 183/4 (1559-1560).  
ISSN: 0014-2999 CODEN: EJPHAZ  
CY Netherlands  
DT Journal; Conference Article  
FS 008 Neurology and Neurosurgery  
030 Pharmacology  
037 Drug Literature Index  
LA English  
CT Medical Descriptors:  
\*hypnosis  
\*motor activity  
\*sedation  
brain homogenate  
drug metabolism  
mouse  
structure activity relation  
animal experiment  
animal cell  
nonhuman  
intracerebroventricular drug administration  
conference paper  
priority journal  
Drug Descriptors:  
4 aminobutyric acid receptor  
benzodiazepine receptor  
radioisotope  
\*azauridine derivative: PD, pharmacology  
\*azauridine derivative: DV, drug development  
\*azauridine derivative: DO, drug dose  
\*thymidine derivative: PD, pharmacology  
\*thymidine derivative: DV, drug development  
\*thymidine derivative: DO, drug dose  
\*uridine derivative: PD, pharmacology

\*uridine derivative: DV, drug development

\*uridine derivative: DO, drug dose

L58 ANSWER 10 OF 13 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.  
 AN 90107322 EMBASE  
 DN 1990107322  
 TI [Effects of chronic uridine treatment on the homeostasis of the dopaminergic synapse: Possible relevance for therapy of schizophrenia]. EFFETTI DEL TRATTAMENTO CRONICO CON URIDINA SULL'OMEOSTASI DELLA SINAPSI DOPAMINERGICA: POSSIBILI IMPLICAZIONI PER LA TERAPIA DELLE SINDROMI SCHIZOFRENICHE.  
 AU Ruggeri M.  
 SO Neurologia Psichiatria Scienze Umane, (1989) 9/4 (529-544). CODEN: NPSUEU  
 CY Italy  
 DT Journal; Article  
 FS 006 Internal Medicine  
 008 Neurology and Neurosurgery  
 032 Psychiatry  
 037 Drug Literature Index  
 LA Italian  
 SL English  
 CT Medical Descriptors:  
 \*behavior  
 aged  
 cytochemistry  
 rat  
 psychological aspect  
 animal cell  
 nonhuman  
 article  
 Drug Descriptors:  
 \*cholecystokinin  
 \*dopamine receptor  
 \*haloperidol: PD, pharmacology  
 \*haloperidol: DT, drug therapy  
 \*haloperidol: CB, drug combination  
 \*uridine: PD, pharmacology  
 \*uridine: DT, drug therapy  
 \*uridine: CB, drug combination  
 RN (cholecystokinin) 9011-97-6, 93443-27-7; (haloperidol) 52-86-8; (uridine) 58-96-8

L58 ANSWER 11 OF 13 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.  
 AN 90095511 EMBASE  
 DN 1990095511  
 TI [A study of the P300 and cerebral maps in subjects with multiinfarct dementia treated with the combination cytidine, uridine and l-glutamine]. DEMENZA MULTIINFARTUALE. STUDIO DELLA P300 E DELLE MAPPE CEREBRALI IN SOGGETTI CON DEMENZA MULTIINFARTUALE (MID) TRATTATI CON ASSOCIAZIONE CITIDINA, URIDINA ED L-GLUTAMINA.  
 AU Firenze C.; Mazzotta G.; Montesi S.; Gallai V.  
 CS Cattedra di Terapia Neurologica, Clinica delle Malattie, Nervose e Mentali, Università degli Studi - Perugia, Perugia, Italy  
 SO Basi Razionali della Terapia, (1989) 19/11 (683-388).  
 ISSN: 0393-7569 CODEN: BRDPEQ  
 CY Italy  
 DT Journal; Article  
 FS 008 Neurology and Neurosurgery  
 030 Pharmacology  
 037 Drug Literature Index  
 LA Italian  
 CT Medical Descriptors:  
 \*cerebrovascular accident  
 \*dementia: DT, drug therapy  
 \*evoked response



adult  
aged  
human

**psychological aspect**  
**oral drug administration**  
article

Drug Descriptors:

**\*cytidine: PD, pharmacology**  
**\*cytidine: DT, drug therapy**  
**\*glutamine: PD, pharmacology**  
**\*glutamine: DT, drug therapy**  
**\*uridine: PD, pharmacology**  
**\*uridine: DT, drug therapy**

RN (cytidine) 65-46-3; (glutamine) 56-85-9, 6899-04-3; (uridine)  
58-96-8

L58 ANSWER 12 OF 13 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

AN 90066245 EMBASE

DN 1990066245

TI Ultrastructural alterations of different formations of the brain induced  
by uridin.

AU Karkishchenko N.N.; Bardakhchyan E.A.

CS Kafedra Klinicheskoy Farmakologii Fakul'teta Usovershenstvovaniya Vrachey  
II Moskovskogo Meditsinskogo Instituta, Moskva, Russia

SO Byulleten Eksperimentalnoi Biologii i Meditsiny, (1990) 108/1 (86-89).

ISSN: 0365-9615 CODEN: BEBMAE

CY Russia

DT Journal; Article

FS 030 Pharmacology

037 Drug Literature Index

LA Russian

SL English

CT Medical Descriptors:

\*coated vesicle

**brain**

**nerve cell**

rat

ultrastructure

animal cell

nonhuman

article

Drug Descriptors:

receptor

**\*uridine: PD, pharmacology**

RN (uridine) 58-96-8

L58 ANSWER 13 OF 13 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

AN 88144040 EMBASE

DN 1988144040

TI Effects of short-term administration of cytidine, uridine and  
levoglutamine, alone or in combination, on the cerebral electrical  
activity of patients with chronic cerebrovascular disease.

AU Manna V.; Martucci N.

CS Department of Neurology and Neurophysiopathology, Italian Institute of  
Neurotraumatology, Rome, Italy

SO International Journal of Clinical Pharmacology Research, (1988) 8/3  
(199-210).

ISSN: 0251-1649 CODEN: CPHRDE

CY Switzerland

DT Journal

FS 008 Neurology and Neurosurgery

030 Pharmacology

037 Drug Literature Index

LA English

CT Medical Descriptors:

**\*cerebrovascular disease: DT, drug therapy**

\*electroencephalography  
 human  
 clinical article  
 male  
 female  
 intravenous drug administration  
 Drug Descriptors:  
 \*cytidine: DT, drug therapy  
 \*cytidine: CB, drug combination  
 \*cytidine: CT, clinical trial  
 \*glutamine: DT, drug therapy  
 \*glutamine: CB, drug combination  
 \*glutamine: CT, clinical trial  
 \*uridine: DT, drug therapy  
 \*uridine: CB, drug combination  
 \*uridine: CT, clinical trial

RN (cytidine) 65-46-3; (glutamine) 56-85-9, 6899-04-3; (uridine)  
 58-96-8

=> d all tot 159

L59 ANSWER 1 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.  
 AN 1998132764 EMBASE  
 TI Uridine preserves ATP during hypoxic perfusion of the rat heart.  
 AU Lin Z.; Richards S.M.; Rosenfeldt F.L.; Pepe S.  
 CS Z. Lin, Cardiac Surgical Transplant Res Unit, Alfred Hospital, Melbourne,  
 Vic., Australia  
 SO Asia Pacific Heart Journal, (1997) 6/3 (190-196).  
 Refs: 30  
 ISSN: 1328-0163 CODEN: APHJF4  
 CY Australia  
 DT Journal; Article  
 FS 018 Cardiovascular Diseases and Cardiovascular Surgery  
 037 Drug Literature Index  
 LA English  
 SL English  
 AB Background: The pyrimidine precursor, orotic acid, by minimising  
 ischaemia-induced ATP loss, improves the functional performance of  
 recently infarcted hearts that have been subjected to global ischaemia.  
 However, we have also previously shown that orotic acid is not directly  
 active in the heart but is preferentially taken up by the liver where it  
 is metabolised to uridine. Aim: To investigate whether uridine itself can  
 minimise hypoxia-induced ATP loss. Methods: Isolated Langendorff-mode  
 perfused rat hearts were subjected to 4 protocols after 20 min normoxic  
 stabilisation: normoxia for 30 min (n = 12); hypoxia for 30 min (n = 12);  
 hypoxia in the presence of 17  $\mu$ M uridine for 30 min (n = 12); and  
 [U-14C]-uridine added directly to the hypoxic perfusate reservoir just  
 prior to 30 min hypoxia (n = 4). [U-14C]-uridine was used to assess the  
 contribution of radiolabel to adenosine formation from adenine nucleotide  
 hydrolysis. Coronary effluent was collected and hearts were freeze-damped  
 for metabolite assay. Results: Hypoxia reduced ATP, from 21.1  $\pm$  1.1 to  
 4.1  $\pm$  0.6  $\mu$ mol/g dry weight (p < 0.05), and reduced total adenine  
 nucleotides (TAN) from 30  $\pm$  1.2 to 10.2  $\pm$  0.9  $\mu$ mol/g dry weight  
 (p < 0.05). Uridine during hypoxia increased myocardial ATP by 94% to 8  
 $\pm$  0.9  $\mu$ mol/g dry weight and TAN by 50% to 15.3  $\pm$  1.1  $\mu$ mol/g  
 dry weight (p < 0.05). Uridine plus hypoxia increased total lactate  
 release by 52% from 768.1  $\pm$  8.6  $\mu$ mol/g dry weight to 1148.4  $\pm$  146  
 $\mu$ mol/g dry weight compared with hypoxia alone (p < 0.05). Although the  
 salvage of purine bases did occur, it was calculated that less than 0.01%  
 of labelled ribose was transferred for salvage of purines. Conclusion: In  
 the present experimental model, uridine protects the hypoxic heart by  
 predominantly enhancing glycolytic energy production.  
 CT Medical Descriptors:  
 \*heart muscle ischemia

\*heart protection  
time  
nonhuman  
male  
rat  
controlled study  
animal tissue  
article  
priority journal  
Drug Descriptors:  
\*adenosine triphosphate: EC, endogenous compound  
\*uridine: PD, pharmacology  
lactic acid: EC, endogenous compound  
adenine nucleotide: EC, endogenous compound  
orotic acid

RN (adenosine triphosphate) 15237-44-2, 56-65-5, 987-65-5; (uridine)  
**58-96-8**; (lactic acid) 113-21-3, 50-21-5; (orotic acid)  
58915-47-2, 65-86-1

L59 ANSWER 2 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

AN 97324140 EMBASE

DN 1997324140

TI Developmental disorder associated with increased cellular nucleotidase activity.

AU Page T.; Yu A.; Fontanesis J.; Nyhan W.L.

CS T. Page, Department of Neurosciences 0624, Univ. of California at San Diego, San Diego, CA 92093, United States

SO Proceedings of the National Academy of Sciences of the United States of America, (1997) 94/21 (11601-11606).

Refs: 25

ISSN: 0027-8424 CODEN: PNASAG

CY United States

DT Journal; Article

FS 008 Neurology and Neurosurgery

022 Human Genetics

037 Drug Literature Index

LA English

SL English

AB Four unrelated patients are described with a syndrome that included developmental delay, seizures, ataxia, recurrent infections, severe language deficit, and an unusual behavioral phenotype characterized by hyperactivity, short attention span, and poor social interaction. These manifestations appeared within the first few years of life. Each patient displayed abnormalities on EEG. No unusual metabolites were found in plasma or urine, and metabolic testing was normal except for persistent hypouricosuria. Investigation of purine and pyrimidine metabolism in cultured fibroblasts derived from these patients showed normal incorporation of purine bases into nucleotides but decreased incorporation of uridine. De novo synthesis of purines and cellular phosphoribosyl pyrophosphate content also were moderately decreased. The distribution of incorporated purines and pyrimidines did not reveal a pattern suggestive of a deficient enzyme activity. Assay of individual enzymes in fibroblast lysates showed no deficiencies. However, the activity of cytosolic 5'-nucleotidase was elevated 6- to 10-fold. Based on the possibility that the observed increased catabolic activity and decreased pyrimidine salvage might be causing a deficiency of pyrimidine nucleotides, the patients were treated with oral pyrimidine nucleoside or nucleotide compounds. All patients showed remarkable improvement in speech and behavior as well as decreased seizure activity and frequency of infections. A double-blind placebo trial was undertaken to ascertain the efficacy of this supplementation regimen. Upon replacement of the supplements with placebo, all patients showed rapid regression to their pretreatment states. These observations suggest that increased nucleotide catabolism is related to the symptoms of these patients, and that the effects of this increased catabolism are reversed by administration of uridine.

CT Medical Descriptors:

\*developmental disorder: DT, drug therapy  
 \*developmental disorder: CN, congenital disorder  
 \*enzyme activity  
 article  
 ataxia: ET, etiology  
 ataxia: CN, congenital disorder  
 case report  
 child  
 clinical feature  
 clinical trial  
 controlled study  
 diet supplementation  
 double blind procedure  
 electroencephalogram  
 female  
 human  
 human cell  
 hyperactivity: ET, etiology  
 language disability: ET, etiology  
 male  
 nucleotide metabolism  
 priority journal  
 purine metabolism  
 pyrimidine metabolism  
 randomized controlled trial  
 recurrent infection: ET, etiology  
 seizure: ET, etiology  
 seizure: CN, congenital disorder  
 Drug Descriptors:  
 \*nucleotidase  
 \*purine  
 \*pyrimidine  
 \*uridine: DO, drug dose  
 \*uridine: DT, drug therapy  
 phosphoribosyl pyrophosphate  
 pyrimidine nucleoside

RN (nucleotidase) 9033-33-4; (purine) 120-73-0; (pyrimidine) 289-95-2;  
 (uridine) 58-96-8; (phosphoribosyl pyrophosphate) 7540-64-9

L59 ANSWER 3 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

AN 97255450 EMBASE

DN 1997255450

TI A longitudinal study of cognitive functioning in patients with classical galactosaemia, including a cohort treated with oral uridine.

AU Manis F.R.; Cohn L.B.; McBride-Chang C.; Wolff J.A.; Kaufman F.R.

CS F.R. Manis, Department of Psychology, University of Southern California, Los Angeles, CA 90089-1061, United States

SO Journal of Inherited Metabolic Disease, (1997) 20/4 (549-555).

Refs: 15

ISSN: 0141-8955 CODEN: JIMDDP

CY Netherlands

DT Journal; Article

FS 007 Pediatrics and Pediatric Surgery

008 Neurology and Neurosurgery

029 Clinical Biochemistry

037 Drug Literature Index

LA English

SL English

AB Existing longitudinal data on patients with classical galactosaemia suggests that neurocognitive functioning is impaired and, in isolated case reports, may show a decline in performance over time. The present study explored whether there are long-term changes in cognitive abilities in patients with galactosaemia and whether oral uridine can improve neurocognitive performance. Thirty-five patients (18 males, 17 females), 29 of whom received oral uridine powder at 150 mg/kg per day (divided dose, three times daily), were evaluated over a 2-5-year period with the

Woodcock-Johnson Revised Cognitive Abilities Test, three academic achievement tests, and the Beery Test of Visual Motor Integration. Results showed that the uridine cohort and a comparison group that received only dietary restriction made small gains in cognitive performance over the treatment period and the size of the gains did not differ significantly. Seven subjects who started uridine prior to the age of 14 months did not differ significantly in their cognitive test scores at an average age of 3.5 years from a group of older children who had begun treatment at 4.5 years of age. These results provide no support for any developmental or uridine-treatment-related change in cognitive functioning for this sample of galactosaemic subjects.

CT Medical Descriptors:

**\*cognition**

**\*galactosemia: DT, drug therapy**

**\*galactosemia: TH, therapy**

adolescent

article

child

clinical article

controlled study

diet restriction

female

human

infant

longitudinal study

male

**motor activity**

newborn

**oral drug administration**

powder

**task performance**

Drug Descriptors:

**\*galactose: EC, endogenous compound**

**\*uridine: AD, drug administration**

**\*uridine: DO, drug dose**

**\*uridine: DT, drug therapy**

**\*uridine: PR, pharmaceuticals**

RN (galactose) 26566-61-0, 50855-33-9, 59-23-4; (uridine) **58-96-8**

L59 ANSWER 4 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

AN 97023727 EMBASE

DN 1997023727

TI Guidelines for symptomatic therapy in spinal muscular atrophy (SMA).

AU Zerres K.; Rudnik-Schoneborn S.; Dubowitz V.; Emery A.E.H.; Forst R.; Granata C.; Haverkamp F.; Merlini L.; Mielke U.; Mokrusch T.; Mortier W.; Nix W.A.; Rudel R.; Voit T.; Wollinsky K.H.; Zierz S.; Rohrig D.

CS Prof. Dr. K. Zerres, Institut für Humangenetik, Universität Bonn, Wilhelmstr. 31, D-53111 Bonn, Germany

SO Acta Cardiologica, (1995) 7/2 (61-66).

Refs: 25

ISSN: 1124-8874 CODEN: ACCAFV

CY Italy

DT Journal; (Short Survey)

FS 008 Neurology and Neurosurgery

019 Rehabilitation and Physical Medicine

022 Human Genetics

037 Drug Literature Index

LA English

SL English

AB Recommendations for symptomatic treatment of proximal spinal muscular atrophy (SMA) are still controversial. As there is as yet no therapeutic strategy leading to functional recovery in SMA, symptomatic therapies play a major role in the medical care of SMA patients. Therefore a workshop was initiated to propose common guidelines for physiotherapy, orthopedic treatment and ventilatory support in SMA. It was concluded that in severe SMA I, overactivity has to be avoided and that ventilatory support should

be offered under certain limited circumstances only, although the overall prognosis is poor. In intermediate SMA II and mild SMA III, active physiotherapy is useful to prevent contractures and to maintain mobility as long as possible. Orthopedic treatment in different disease stages is important and includes surgical procedures of limbs and spine. Patients with SMA II and III should receive all available ventilatory support, starting with preventive respiratory training and proceeding to assisted ventilation, if hypoventilation becomes evident. According to prevailing belief, neither electrical stimulation nor drug treatment can currently be recommended in SMA.

CT Medical Descriptors:

\*spinal muscular atrophy: TH, therapy  
 \*spinal muscular atrophy: RH, rehabilitation  
 artificial ventilation  
 human  
 orthopedics  
 physiotherapy  
 short survey

Drug Descriptors:

\*azathioprine: DT, drug therapy  
 \*corticosteroid: DT, drug therapy  
 \*corticotropin: DT, drug therapy  
 \*ganglioside: DT, drug therapy  
 \*orotic acid: DT, drug therapy  
 \*physostigmine: DT, drug therapy  
 \*tacrine: DT, drug therapy  
 \*uridine: DT, drug therapy

RN (azathioprine) 446-86-6; (corticotropin) 11136-52-0, 9002-60-2, 9061-27-2;  
 (orotic acid) 58915-47-2, 65-86-1; (physostigmine) 57-47-6, 64-47-1;  
 (tacrine) 1684-40-8, 3198-41-2, 321-64-2; (uridine) 58-96-8

L59 ANSWER 5 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

AN 96329473 EMBASE

DN 1996329473

TI A Phase I trial of a modified, dose intensive FAMTX regimen (high dose 5-fluorouracil + doxorubicin + high dose methotrexate + leucovorin) with oral uridine rescue.

AU Schwartz G.K.; Christman K.; Saltz L.; Casper E.; Quan V.; Bertino J.; Martin D.S.; Colofiore J.; Kelsen D.

CS Memorial Sloan-Kettering Cancer Ctr., 1275 New York Ave., New York, NY 10021, United States

SO Cancer, (1996) 78/9 (1988-1995).  
 ISSN: 0008-543X CODEN: CANCAR

CY United States

DT Journal; Article

FS 016 Cancer  
 037 Drug Literature Index  
 048 Gastroenterology

LA English

SL English

AB BACKGROUND. Dose intensification of 5-fluorouracil (5-FU) is complicated by increased toxicity, 5-FU is a fluorine-substitute analog of uracil. In preclinical studies, administration of oral uridine (Ur) has been shown to allow for dose intensification of 5-FU with enhancement of its antitumor activity. Therefore, a Phase I trial was designed aimed at dose intensification of 5-FU as a component of a modified 5-FU-doxorubicin-methotrexate (FAMTX) regimen using oral Ur rescue. METHODS. Methotrexate (MTX) was administered to all patients at a fixed dose of 1.5 g/m<sup>2</sup>. MTX was followed 24 hours later by escalating doses of 5-FU starting at 800 mg/m<sup>2</sup> with leucovorin rescue. Cycles of 5-FU and MTX were repeated every 15 days. Every other cycle, patients received doxorubicin ('Adria cycles') at a dose of 30 mg/m<sup>2</sup>. Oral Ur was administered at a dose of 8 mg/m<sup>2</sup> every 6 hours for 12 doses. In the first phase of the study, patients received Ur only if they developed Grade 3 or 4 hematologic toxicity. In the second phase, all patients received Ur 24 hours after 5-FU on all cycles. RESULTS. Without Ur rescue, the maximum tolerated dose (MTD) of 5-FU was

900 mg/m<sup>2</sup> on the Adria cycles and 1.1 mg/m<sup>2</sup> on the non-adria cycles. With Ur, the MTD of 5-FU increased to 1.2 mg/m<sup>2</sup> on the adria cycles and to 1.6 mg/m<sup>2</sup> on the non- adria cycles. CONCLUSIONS. In this modified FAMTX regimen, oral Ur administration allowed for dose-intensification of 5-FU, with a 33% increase in the MTD of 5-FU on the Adria cycles and a 45% increase in the MTD of 5-FU dose on the non-Adria cycles.

## CT Medical Descriptors:

\*stomach carcinoma: DI, diagnosis  
**\*stomach carcinoma: DT, drug therapy**  
 adult

**antineoplastic activity**

article

cancer control

cancer survival

clinical trial

controlled study

**dose response**

**drug efficacy**

**drug tolerance**

human

major clinical study

**oral drug administration**

**patient compliance**

phase 1 clinical trial

priority journal

Drug Descriptors:

\*doxorubicin: CT, clinical trial

**\*doxorubicin: CB, drug combination**

\*doxorubicin: DO, drug dose

**\*doxorubicin: DT, drug therapy**

**\*fluorouracil: CB, drug combination**

\*fluorouracil: DO, drug dose

**\*fluorouracil: DT, drug therapy**

\*fluorouracil: CT, clinical trial

\*folinic acid: CT, clinical trial

**\*folinic acid: DT, drug therapy**

\*folinic acid: DO, drug dose

**\*folinic acid: CB, drug combination**

**\*methotrexate: CB, drug combination**

**\*methotrexate: DT, drug therapy**

\*methotrexate: DO, drug dose

\*methotrexate: CT, clinical trial

**\*uridine derivative: CT, clinical trial**

**\*uridine derivative: DO, drug dose**

**\*uridine derivative: DT, drug therapy**

**\*uridine derivative: PK, pharmacokinetics**

RN (doxorubicin) 23214-92-8, 25316-40-9; (fluorouracil) 51-21-8; (folinic acid) 58-05-9, 68538-85-2; (methotrexate) 15475-56-6, 59-05-2, 7413-34-5

L59 ANSWER 6 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

AN 96303055 EMBASE

DN 1996303055

TI N3-Phenacyluridine, a novel hypnotic compound, interacts with the benzodiazepine receptor.

AU Kimura T.; Kuze J.; Watanabe K.; Kondo S.; Ho I.K.; Yamamoto I.

CS Department of Hygienic Chemistry, Faculty of Pharmaceutical Sciences, Hokuriku University, 3-Ho, Kanagawa-machi, Kanazawa 920-11, Japan

SO European Journal of Pharmacology, (1996) 311/2-3 (265-269).

ISSN: 0014-2999 CODEN: EJPHAZ

CY Netherlands

DT Journal; Article

FS 008 Neurology and Neurosurgery

030 Pharmacology

032 Psychiatry

037 Drug Literature Index

LA English

SL English  
AB N3-Phenacyluridine (3-phenacyl-1-.beta.-D-ribofuranosyluracil) has potent sedative and hypnotic activities following intracerebroventricular injection in mice. To study the mechanism of action of N3-phenacyluridine, the interaction of this compound with the benzodiazepine receptor has been investigated. Results obtained showed that this compound inhibited specific binding of [3H]flunitrazepam to synaptic membranes of bovine cortex in a concentration-dependent fashion (IC50 = 129 .mu.M). Scatchard analysis of [3H]flunitrazepam binding revealed that N3-phenacyluridine interacted with the ligand at the benzodiazepine receptor binding site in a competitive manner. Ro 15-1788 (8-fluoro-3-carboethoxy-5,6-dihydro-5-methyl-6-oxo-4H-imidazo[1,5a]1,4-benzodiazepine), a benzodiazepine receptor antagonist, also inhibited the specific binding of [3H]flunitrazepam in the presence of the compound. The results suggest that the pharmacological activity of N3-phenacyluridine may be partially mediated through the benzodiazepine receptor.

CT Medical Descriptors:

**\*brain cortex**

**\*synaptic membrane**

animal tissue

article

binding site

cattle

controlled study

**drug receptor binding**

nonhuman

priority journal

Drug Descriptors:

**\*benzodiazepine receptor: EC, endogenous compound**

**\*hypnotic agent: CM, drug comparison**

**\*hypnotic agent: AN, drug analysis**

**\*hypnotic agent: PD, pharmacology**

**\*hypnotic agent: DO, drug dose**

**\*hypnotic agent: DV, drug development**

**\*uridine derivative: DO, drug dose**

**\*uridine derivative: PD, pharmacology**

**\*uridine derivative: CM, drug comparison**

**\*uridine derivative: AN, drug analysis**

**\*uridine derivative: DV, drug development**

**benzodiazepine receptor blocking agent: PD, pharmacology**

**benzodiazepine receptor blocking agent: DO, drug dose**

**benzodiazepine receptor blocking agent: CM, drug comparison**

**flumazenil: PD, pharmacology**

**flumazenil: DO, drug dose**

**flumazenil: CM, drug comparison**

**flunitrazepam: CM, drug comparison**

RN (flumazenil) 78755-81-4; (flunitrazepam) 1622-62-4

CN (1) Ro 151788

CO (1) Hoffmann la roche (Japan)

L59 ANSWER 7 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

AN 95342810 EMBASE

DN 1995342810

TI Uridine reduces rotation induced by L-dopa and methamphetamine in 6-OHDA-treated rats.

AU Myers C.S.; Fisher H.; Wagner G.C.

CS Department of Psychology, Busch Campus, Rutgers University, New Brunswick, NJ 08903, United States

SO Pharmacology Biochemistry and Behavior, (1995) 52/4 (749-753).

ISSN: 0091-3057 CODEN: PBBHAU

CY United States

DT Journal; Article

FS 008 Neurology and Neurosurgery

030 Pharmacology

037 Drug Literature Index

LA English



SL English

AB The pyrimidine nucleoside uridine may reduce side effects associated with antipsychotic medication by interacting with dopamine or GABA neurotransmission. Male Sprague-Dawley rats were used to investigate coadministration of uridine with agents that alter food intake (amphetamine, haloperidol, and chlordiazepoxide) and locomotor activity (methamphetamine and L-dopa). Results indicated that chronic uridine [32.0 mg/kg, intraperitoneally (IP)] alone did not alter milk intake or reduction of milk intake induced by amphetamine (dose range 0.5-2.0 mg/kg, IP) or haloperidol (0.125-1.0 mg/kg, IP), nor did it alter the biphasic response induced by chlordiazepoxide (5.0-40.0 mg/kg, IP). However, uridine-treated animals with unilateral striatal lesions exhibited no rotational behavior in the absence of drug challenge, but showed decreased rotation induced by the dopamine agonist, L-dopa (50.0-200.0 mg/kg, IP) compared with controls. In addition, uridine-treated rats exhibited reduced rotation after repeated injections of methamphetamine (4.0 mg/kg, IP) in contrast to increasingly greater rotation observed in control animals. These results are further evidence that chronic uridine may alter drug-induced dopaminergic activity without exerting effects itself.

CT Medical Descriptors:

**\*brain injury**  
**\*circling behavior**  
**\*corpus striatum**  
**\*dopaminergic transmission**  
 animal experiment  
 animal model  
 article  
 controlled study  
**drug antagonism**  
 food intake  
**gabaergic transmission**  
**intraperitoneal drug administration**  
 locomotion  
 male  
 nonhuman  
 priority journal  
 rat

Drug Descriptors:

milk  
**\*levodopa: DO, drug dose**  
**\*levodopa: CB, drug combination**  
**\*levodopa: IT, drug interaction**  
**\*levodopa: PD, pharmacology**  
**\*methamphetamine: DO, drug dose**  
**\*methamphetamine: IT, drug interaction**  
**\*methamphetamine: PD, pharmacology**  
**\*uridine: PD, pharmacology**  
**\*uridine: IT, drug interaction**  
 amphetamine: DO, drug dose  
 amphetamine: PD, pharmacology  
 benserazide: CB, drug combination  
 benserazide: PD, pharmacology  
 chlordiazepoxide: DO, drug dose  
 chlordiazepoxide: PD, pharmacology  
 dopamine receptor stimulating agent: IT, drug interaction  
 dopamine receptor stimulating agent: DO, drug dose  
 dopamine receptor stimulating agent: PD, pharmacology  
 haloperidol: PD, pharmacology  
 haloperidol: DO, drug dose  
 oxidopamine: TO, drug toxicity  
 pyrimidine nucleoside: IT, drug interaction  
 pyrimidine nucleoside: PD, pharmacology

RN (milk) 8049-98-7; (levodopa) 59-92-7; (methamphetamine) 28297-73-6, 51-57-0, 537-46-2, 7632-10-2; (uridine) **58-96-8**; (amphetamine) 1200-47-1, 139-10-6, 156-34-3, 2706-50-5, 300-62-9, 51-62-7, 60-13-9, 60-15-1; (benserazide) 14919-77-8, 322-35-0; (chlordiazepoxide) 438-41-5,

58-25-3; (haloperidol) 52-86-8; (oxidopamine) 1199-18-4, 28094-15-7,  
636-00-0

CN Ro 4 4602

L59 ANSWER 8 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

AN 94380783 EMBASE

DN 1994380783

TI Sleep promoting effects of N3-benzyluridine in unrestrained rats.

AU Kimura T.; Watanabe K.; Yamamoto I.; Honda K.; Inoue S.

CS Department of Hygienic Chemistry, Faculty of Pharmaceutical Sciences,  
Hokuriku University, 3-Ho, Kanagawa-machi, Kanazawa 920-11, Japan

SO Research Communications in Psychology, Psychiatry and Behavior, (1993)  
18/3-4 (111-119).

ISSN: 0362-2428 CODEN: RCPBDC

CY United States

DT Journal; Article

FS 002 Physiology

030 Pharmacology

032 Psychiatry

037 Drug Literature Index

LA English

SL English

AB Effect of N3-benzyluridine (N3-ByUd), having hypnotic activity, on rat natural sleep was studied. When N3-ByUd (1 and 10 pmol) was nocturnally infused to rat third ventricle from 19:00 to 05:00 in unrestrained environment, rat sleep was significantly increased compared to saline infused rats during light period of recovery day. Total time and frequency of paradoxical sleep (PS) of rats infused with N3-ByUd (1 pmol/10 h) during light period of recovery day increased 22 and 25%, respectively, compared to that of control (saline). This compound (10 pmol/10 h) also increased in frequency of slow wave sleep (SWS) by 119% of control. These results indicate that N3-ByUd affects at least in part the natural sleep of rats.

CT Medical Descriptors:

\*circadian rhythm

**\*sleep pattern**

animal experiment

article

controlled study

drug synthesis

electroencephalography

electromyography

**intracerebroventricular drug administration**

male

nonhuman

rat

**rem sleep**

**slow wave sleep**

Drug Descriptors:

**\*uridine derivative: DV, drug development**

**\*uridine derivative: PD, pharmacology**

3 benzyluridine: DV, drug development

**3 benzyluridine: PD, pharmacology**

pentobarbital

reagent

**uridine**

unclassified drug

RN (pentobarbital) 57-33-0, 76-74-4; (uridine) **58-96-8**

CO Abbott (United States); Kohjin (Japan); Wako pure chemical industry  
(Japan)

L59 ANSWER 9 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

AN 94219765 EMBASE

DN 1994219765

TI Uridine potentiates haloperidol's disruption of conditioned avoidance responding.

AU Myers C.S.; Fisher H.; Wagner G.C.  
 CS Department of Psychology, Busch Campus, Rutgers University, New Brunswick,  
 NJ 08903, United States  
 SO Brain Research, (1994) 651/1-2 (194-198).  
 ISSN: 0006-8993 CODEN: BRREAP  
 CY Netherlands  
 DT Journal; Article  
 FS 002 Physiology  
 008 Neurology and Neurosurgery  
 032 Psychiatry  
 030 Pharmacology  
 037 Drug Literature Index  
 LA English  
 SL English  
 AB The pyrimidine nucleoside, uridine, has been proposed as a potential  
 supplement in the treatment of psychosis based on its ability to reduce  
 haloperidol-induced dopamine release. These experiments investigated the  
 effect of uridine (32 mg/kg, i.p.) coadministered with the neuroleptic  
 haloperidol, on rats engaged in one way conditioned avoidance responding.  
 Uridine itself had no effect on animals' performance, while haloperidol  
 (dose range 0.05-0.4 mg/kg, i.p., 90 min before test session) decreased  
 number of avoidances and increased avoidance and escape latencies in a  
 dose-dependent manner. When coadministered with haloperidol, uridine  
 significantly potentiated the disruption of avoidance and avoidance  
 latency induced by haloperidol. This potentiation was still evident after  
 chronic (27 days) uridine treatment. Importantly, coadministration of  
 uridine did not potentiate haloperidol-induced increase of escape latency.  
 The potentiation of haloperidol-induced disruption of conditioned  
 avoidance responding suggests that uridine coadministration might enhance  
 the antipsychotic action of traditional neuroleptics. This would allow for  
 a reduction in the therapeutic dose of the antipsychotic, thereby reducing  
 side effect frequency.  
 CT Medical Descriptors:  
**\*psychosis: DT, drug therapy**  
 animal experiment  
 article  
**avoidance behavior**  
**conditioning**  
 controlled study  
**intraperitoneal drug administration**  
 male  
 nonhuman  
 priority journal  
 rat  
 Drug Descriptors:  
**\*haloperidol: PD, pharmacology**  
**\*haloperidol: DT, drug therapy**  
**\*haloperidol: DO, drug dose**  
**\*haloperidol: IT, drug interaction**  
**\*haloperidol: CB, drug combination**  
**\*uridine: PD, pharmacology**  
**\*uridine: IT, drug interaction**  
**\*uridine: CB, drug combination**  
 nucleoside  
 RN (haloperidol) 52-86-8; (uridine) 58-96-8  
 L59 ANSWER 10 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.  
 AN 94172847 EMBASE  
 DN 1994172847  
 TI Boron neutron capture therapy of primary and metastatic brain tumors.  
 AU Barth R.F.; Soloway A.H.  
 CS Department of Pathology, Ohio State University, Columbus, OH 43210, United  
 States  
 SO Molecular and Chemical Neuropathology, (1994) 21/2-3 (139-154).  
 ISSN: 1044-7393 CODEN: MCHNEM  
 CY United States

DT Journal; Conference Article  
 FS 008 Neurology and Neurosurgery  
 016 Cancer  
 023 Nuclear Medicine  
 037 Drug Literature Index  
 LA English  
 SL English  
 AB Boron neutron capture therapy (BNCT) is based on the nuclear reaction that occurs when a stable isotope, boron-10, is irradiated with low energy (0.025 eV) thermal neutrons (n(th)) to yield alpha (4He) particles and 7Li nuclei ( $^{10}\text{B} + \text{n(th)} \rightarrow ^4\text{He} + ^7\text{Li} + 2.79 \text{ MeV}$ ). The success of BNCT as a tumoricidal modality is dependent on the delivery of a sufficient quantity of  $^{10}\text{B}$  and n(th) to individual cancer cells to sustain a lethal  $^{10}\text{B}(\text{n}, \alpha)^7\text{Li}$  reaction. Boron delivery agents include a variety of compounds, such as the sulfhydryl containing polyhedral borane sodium borocaptate ( $\text{Na}_2\text{B}_{12}\text{H}_{11}\text{SH}$ , [BSH]), boronoporphyrins, boronophenylalanine, carboranyl uridines (CBU), and boronated monoclonal antibodies (MAB). The present review will focus on three delivery systems that currently are under investigation in our laboratories, boronated monoclonal antibodies, carboranyl uridines, and boronophenylalanine. Methodology has been developed to heavily boronate MAB using a precision macromolecule, a 'starburst' dendrimer, which can be linked to MAB by means of heterobifunctional reagents. Although the resulting immunoconjugates retain their in vitro immunoreactivity, they lose their in vivo tumor localizing properties and accumulate in the liver. In order to obviate this problem, work is now in progress to produce bispecific MAB, which can simultaneously recognize a tumor-associated antigen and a boronated macromolecule. Boron containing nucleosides are potential vehicles for incorporating boron compounds into nucleic acids of neoplastic cells. For this purpose, carboranyl uridines have been synthesized with the boron moiety on either the pyrimidine base or on the carbohydrate component. Although such structures appear to be avidly taken up and retained by tumor cells in vitro, only the 5-carboranyl-nucleosides are converted biologically to the nucleotide. There is no evidence, however, that the latter are incorporated into nucleic acids. Other carboranyl nucleosides currently are being synthesized that may have better tumor localizing properties. The potential use of boronophenylalanine as a capture agent for the treatment of melanoma metastatic to the brain also is under investigation. A nude rat model has been developed using human melanoma cells that are stereotactically implanted into the brain. BNCT-treated animals have either had prolonged survival times or continue to live compared to control rats that invariably died of their tumors, thereby suggesting therapeutic efficacy.

CT Medical Descriptors:  
**\*brain metastasis: RT, radiotherapy**  
**\*brain tumor: RT, radiotherapy**  
 cancer survival  
 clinical trial  
 conference paper  
**drug conjugation**  
 human  
**intralesional drug administration**  
**intraperitoneal drug administration**  
**intravenous drug administration**  
 melanoma: RT, radiotherapy  
 neutron capture therapy  
 nonhuman  
 priority journal  
 tumor localization  
 Drug Descriptors:  
**\*boronic acid derivative: DV, drug development**  
**\*boronic acid derivative: PR, pharmaceuticals**  
**\*monoclonal antibody: PR, pharmaceuticals**  
**\*monoclonal antibody: DV, drug development**  
**\*nucleoside derivative: DV, drug development**

\*nucleoside derivative: PR, pharmaceuticals  
 \*uridine derivative: PR, pharmaceuticals  
 \*uridine derivative: DV, drug development  
 4 boronophenylalanine: PR, pharmaceuticals  
 borane derivative: PR, pharmaceuticals  
 borocaptate sodium: PR, pharmaceuticals  
 boron 10  
 boronoporphyrin derivative: PR, pharmaceuticals  
 carboranylalanine: PR, pharmaceuticals  
 deuteroporphyrin derivative: PR, pharmaceuticals  
 unclassified drug

RN (4 boronophenylalanine) 76410-58-7; (boron 10) 14798-12-0;  
 (carboranylalanine) 61216-60-2

L59 ANSWER 11 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

AN 94166153 EMBASE

DN 1994166153

TI [Effects of a nucleotide-nucleoside mixture on the ischemic muscular metabolism in patients with peripheral arterial occlusive disease stage II].

EFFEKTE EINES NUKLEOTID-NUKLEOSID-GEMISCHES AUF DEN ISCHAMISCHEN MUSKELSTOFFWECHSEL BEI PATIENTEN MIT PERIPHERER ARTERIELLER VERSCHLUSSKRANKHEIT STADIUM II..

AU Rexroth W.; Huber K.H.; Radle J.; Semmler W.; Van Kaick G.

CS Abteilung Innere Medizin, St. Josefskrankenhaus, Landhausstrasse 25, D-69115 Heidelberg, Germany

SO Vasa - Journal of Vascular Diseases, (1994) 23/2 (98-108).

ISSN: 0301-1526 CODEN: VASAAH

CY Switzerland

DT Journal; Article

FS 008 Neurology and Neurosurgery

023 Nuclear Medicine

037 Drug Literature Index

LA German

SL German; English

AB In order to assess the acute metabolic effects of an intraarterial infusion of nucleotide-nucleoside-mixture (NNM), <sup>31</sup>P-mr-spectroscopy at the site of m. gastrocnemius and metabolite determinations from blood of the femoral artery and vein were carried out in 10 patients with PAOD stage II during ergometric calf exercise to the claudication pain limit. The spectroscopic measurements revealed a greater exercise-induced fall of PCr and a higher increase of P(i) in calf muscles during supply of NNM compared with control ergometry. Post-exercise recovery of PCr was distinctly delayed during infusion of NNM. The anaerobic production of energy, however, was sufficient to maintain the ATP concentration to the same extent as under control ergometry. On the other hand, intramuscular lactate acidosis developed to a lower degree with NNM infusion than without NNM. A reduced muscular release of lactate, pyruvate, ammonia and alanine followed from the evaluation of the arteriovenous balance of these metabolites in the femoral vessels indicating a favourable global metabolic effect of NNM infusion in the extremity. The apparent contradiction in the spectroscopic and analytic-biochemical findings can be explained by local blood shunts induced by maximum vasodilation. Noninvasive mr-spectroscopy allows to detect directly and continuously the metabolic impact of ischemia in the calf muscles afflicted by arterial occlusion, whereas the metabolite concentrations in femoral blood are altered by afflux from non-ischemic areas. The known clinical benefit of frequently repeated intraarterial infusions of NNM is thought to be due to an expansion of collateral circulation and to a favourable influence on endothelial functions.

CT Medical Descriptors:

\*collateral circulation

\*intermittent claudication: DT, drug therapy

\*muscle ischemia

\*muscle metabolism

\*peripheral occlusive artery disease

adult  
 aged  
 angiography  
 article  
 clinical article  
 clinical trial  
**drug mixture**  
 exercise  
 human  
**intraarterial drug administration**  
 male  
 phosphorus nuclear magnetic resonance  
 Drug Descriptors:  
 \*adenosine diphosphate: CB, drug combination  
 \*adenosine diphosphate: DT, drug therapy  
 \*adenosine diphosphate: PD, pharmacology  
 \*adenosine phosphate: DT, drug therapy  
 \*adenosine phosphate: CB, drug combination  
 \*adenosine phosphate: PD, pharmacology  
 \*adenosine triphosphate: PD, pharmacology  
 \*adenosine triphosphate: DT, drug therapy  
 \*adenosine triphosphate: CB, drug combination  
 \*guanosine: PD, pharmacology  
 \*guanosine: DT, drug therapy  
 \*guanosine: CB, drug combination  
 \*guanosine phosphate: DT, drug therapy  
 \*guanosine phosphate: CB, drug combination  
 \*guanosine phosphate: PD, pharmacology  
 \*inosine: PD, pharmacology  
 \*inosine: DT, drug therapy  
 \*inosine: CB, drug combination  
 \*nucleoside: CB, drug combination  
 \*nucleoside: DT, drug therapy  
 \*nucleoside: PD, pharmacology  
 \*nucleotide: PD, pharmacology  
 \*nucleotide: CB, drug combination  
 \*nucleotide: DT, drug therapy  
 \*uridine: PD, pharmacology  
 \*uridine: DT, drug therapy  
 \*uridine: CB, drug combination  
 laevadosin: PD, pharmacology  
 laevadosin: DT, drug therapy  
 unclassified drug

RN (adenosine diphosphate) 20398-34-9, 58-64-0; (adenosine phosphate)  
 61-19-8, 8063-98-7; (adenosine triphosphate) 15237-44-2, 56-65-5,  
 987-65-5; (guanosine) 118-00-3; (guanosine phosphate) 29593-02-0,  
 5550-12-9, 85-32-5; (inosine) 58-63-9; (uridine) **58-96-8**;  
 (laevadosin) 60675-64-1  
 CN Laevadosin

L59 ANSWER 12 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.  
 AN 94144034 EMBASE  
 DN 1994144034  
 TI The potent depressant effects of N3-phenacyluridine in mice.  
 AU Yamamoto I.; Kuze J.; Kimura T.; Watanabe K.; Kondo S.; Ho I.K.  
 CS Faculty of Pharmaceutical Sciences, Hokuriku University, 3-Ho,  
 Kanagawa-machi, Kanazawa 920-11, Japan  
 SO Biological and Pharmaceutical Bulletin, (1994) 17/4 (514-516).  
 ISSN: 0918-6158 CODEN: BPBLEO  
 CY Japan  
 DT Journal; Article  
 FS 008 Neurology and Neurosurgery  
 032 Psychiatry  
 030 Pharmacology  
 037 Drug Literature Index  
 LA English

SL English  
AB The hypnotic activity of N3-phenacyluridine in 2.0 .mu.mol/mouse by intracerebroventricular (i.c.v.) injection was 20 times stronger than that of known N3-benzyluridine. In 0.5 .mu.mol/mouse, i.c.v., this compound strongly potentiated both pentobarbital- and diazepam-induced sleep as compared to N3-substituted uridines, including N3-benzyluridine. Furthermore, the compound caused motor incoordination as well as decreasing spontaneous activity in the same dose. These results indicate that among the N3-substituted uridines and related compounds previously reported, N3-phenacyluridine possesses potent depressant effects.

CT Medical Descriptors:  
\*central nervous system depression  
\*hypnosis  
\*sleep time  
animal experiment  
article  
behavior  
controlled study  
intracerebroventricular drug administration  
locomotion  
male  
mouse  
nonhuman  
Drug Descriptors:  
\*uridine derivative: CM, drug comparison  
\*uridine derivative: CB, drug combination  
\*uridine derivative: IT, drug interaction  
\*uridine derivative: PD, pharmacology  
3 n benzyluridine: PD, pharmacology  
3 n benzyluridine: CB, drug combination  
3 n benzyluridine: IT, drug interaction  
3 n benzyluridine: CM, drug comparison  
3 n phenacyluridine: CM, drug comparison  
3 n phenacyluridine: IT, drug interaction  
3 n phenacyluridine: PD, pharmacology  
3 n phenacyluridine: DV, drug development  
3 n phenacyluridine: AN, drug analysis  
3 n phenacyluridine: CB, drug combination  
diazepam: CB, drug combination  
diazepam: IT, drug interaction  
diazepam: PD, pharmacology  
pentobarbital: CB, drug combination  
pentobarbital: IT, drug interaction  
pentobarbital: PD, pharmacology  
unclassified drug

RN (diazepam) 439-14-5; (pentobarbital) 57-33-0, 76-74-4  
CO Kasei (Japan); Yamanouchi pharmaceutical (Japan); Yamasa shoyu (Japan)

L59 ANSWER 13 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.  
AN 93213059 EMBASE  
DN 1993213059  
TI Lateral preoptic lesions void slow-wave sleep enhanced by uridine but not by muramyl dipeptide in rats.  
AU Kimura-Takeuchi M.; Inoue S.  
CS Inst. for Medical/Dental Engineering, Tokyo Medical and Dental University, 2-3-10 Surugadai Kandai, Chiyoda-ku, Tokyo 101, Japan  
SO Neuroscience Letters, (1993) 157/1 (17-20).  
ISSN: 0304-3940 CODEN: NELED5  
CY Ireland  
DT Journal; Article  
FS 002 Physiology  
008 Neurology and Neurosurgery  
030 Pharmacology  
037 Drug Literature Index  
LA English  
SL English

AB We investigated the site of action of two sleep-inducing substances, viz., muramyl dipeptide (MDP) and uridine. Localized electrolytic lesions were made bilaterally in the lateral preoptic hypothalamus (LPO) in rats and nocturnal 10-h i.c.v. infusions of MDP and uridine were performed before and after the LPO lesions. MDP increased only slow-wave sleep (SWS) in both intact and LPO-lesioned rats. Uridine promoted both SWS and paradoxical sleep (PS) before the LPO lesions whereas it increased only PS after the lesions. These results suggest that the LPO is crucial for SWS-promoting action of uridine but not MDP.

CT Medical Descriptors:  
**\*brain injury**  
**\*preoptic area**  
**\*slow wave sleep**  
 animal experiment  
 animal tissue  
 article  
 brain temperature  
 controlled study  
**intravenous drug administration**  
 nonhuman  
 priority journal  
 rat  
**rem sleep**  
 Drug Descriptors:  
**\*muramyl dipeptide: PD, pharmacology**  
**\*uridine: PD, pharmacology**

RN (uridine) 58-96-8

L59 ANSWER 14 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.  
 AN 93210055 EMBASE  
 DN 1993210055  
 TI Interaction of the mioflazine derivative R75231 with the nucleoside transporter: Evidence for positive cooperativity.  
 AU Jones K.W.; Hammond J.R.  
 CS Department Pharmacology/Toxicology, Medical Science Building, University of Western Ontario, London, Ont. N6A 5C1, Canada  
 SO European Journal of Pharmacology - Molecular Pharmacology Section, (1993) 246/2 (97-104).  
 ISSN: 0922-4106 CODEN: EJPPET  
 CY Netherlands  
 DT Journal; Article  
 FS 023 Nuclear Medicine  
 029 Clinical Biochemistry  
 030 Pharmacology  
 037 Drug Literature Index  
 LA English  
 SL English  
 AB This study investigated the interaction of the mioflazine derivative R75231 with the nucleoside transport system of rabbit cortical synaptosomes, and assessed the binding of [3H]R75231 to human erythrocyte ghost membranes. R75231 was a potent inhibitor of [3H]nitrobenzylthioinosine binding and [3H]uridine uptake in synaptosomes ( $K(i) < 10$  nM). This inhibition was evident even after extensive washing of the synaptosomes, subsequent to exposure to R75231. In addition to its tight binding characteristics, R75231 was shown to be a 'mixed' type inhibitor of [3H]nitrobenzylthioinosine binding (increased  $K(D)$ , decreased  $B(max)$ ). [3H]R75231 bound with high affinity ( $K(D) = 0.4$  nM) to erythrocyte membranes with a  $B(max)$  of 44 pmol/mg protein, which is comparable to the number of [3H]nitrobenzylthioinosine binding sites in this preparation. Binding of [3H]R75231 to these membranes was reversible, but the rate of dissociation was dependent upon the displacer used. Nitrobenzylthioinosine and dipyrindamole each induced a complete dissociation of site-bound [3H]R75231 at rates not significantly different from those observed using a protocol involving a 100-fold dilution with buffer (no displacer). However, U75231 and mioflazine slowed the rate of dissociation of [3H]R75231 and actually caused an initial increase in the



amount of site-bound [3H]R75231. Adenosine, on the other hand, enhanced the rate of [3H]R75231 dissociation. These results indicate that R75231 binding to the nucleoside transporter is a complex reaction, which may involve multiple interacting sites demonstrating positive cooperativity.

CT Medical Descriptors:

**\*brain cortex**  
 \*erythrocyte membrane  
 \*nucleoside transport  
 animal tissue  
 article  
 binding affinity  
**brain synaptosome**  
**concentration response**  
 controlled study  
 dissociation constant  
 human  
 human tissue  
 nonhuman  
 priority journal  
 rabbit

Drug Descriptors:

**\*adenosine: PD, pharmacology**  
**\*dipyridamole: PD, pharmacology**  
**\*draflazine: PD, pharmacology**  
**\*mioflazine: PD, pharmacology**  
**\*nitrobenzylthioinosine: PD, pharmacology**  
**\*uridine: PK, pharmacokinetics**  
**dilazep: PD, pharmacology**  
**nitrobenzylthioguanosine: PD, pharmacology**  
 radioisotope

RN (adenosine) 58-61-7; (dipyridamole) 58-32-2; (draflazine) 120770-34-5;  
 (mioflazine) 79467-23-5, 83898-67-3; (nitrobenzylthioinosine) 65177-80-2;  
 (uridine) **58-96-8**; (dilazep) 20153-98-4, 35898-87-4;  
 (nitrobenzylthioguanosine) 13153-27-0  
 CN (1) R 75231  
 CO (1) Janssen (Belgium); Icn (Canada); Asta (Germany); Sigma (United States); Moravek (United States)

L59 ANSWER 15 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

AN 93102822 EMBASE

DN 1993102822

TI Differential sleep modulation by sequentially administered muramyl dipeptide and uridine.

AU Kimura-Takeuchi M.; Inoue S.

CS Medical/Dental Engineering Institute, Tokyo Medical and Dental University, Kanda-Surugadai 2-3-10, Chiyoda-ku, Tokyo 101, Japan

SO Brain Research Bulletin, (1993) 31/1-2 (33-37).

ISSN: 0361-9230 CODEN: BRBUDU

CY United States

DT Journal; Article

FS 002 Physiology  
 008 Neurology and Neurosurgery  
 030 Pharmacology  
 037 Drug Literature Index

LA English

SL English

AB In an attempt to investigate the effects on sleep modulation of order of administration of two substances, sequential intracerebroventricular (ICV) infusions of muramyl dipeptide (MDP, 1.0 nmol) and uridine (5.0 pmol) were conducted in freely behaving rats. To eliminate the influence of intermittent infusions on their behavior, the rats were continuously ICV infused with physiological saline solution, which did not affect their normal sleep-waking dynamics. Under these experimental conditions, uridine infusion (2400-0500 h) attenuated the enhancement of slow-wave sleep (SWS) caused by prior infusion of MDP (1900-2400 h) to the baseline level and, thus, did not exert a sleep-promoting property. In contrast,

MDP infusion (2400-0500 h) further potentiated the SWS-enhancing activity of preinfused uridine (1900-2400 h). A single infusion of MDP or uridine (2400-0500 h) similarly enhanced SWS. These results demonstrate that observed differences in the induction and maintenance of sleep are dependent upon the order of exogenously infused uridine and MDP. The time sequence per se of these sleep substances may be responsible for the differential temporal changes in sleep. It is, therefore, assumed that a crucial order of multiple sleep substances may dynamically and differentially regulate sleep in the brain.

CT Medical Descriptors:

**\*sleep**

animal experiment

article

controlled study

**drug effect**

**drug potentiation**

**intracerebroventricular drug administration**

male

nonhuman

priority journal

rat

regulatory mechanism

**sleep waking cycle**

**slow wave sleep**

Drug Descriptors:

**\*muramyl dipeptide: IT, drug interaction**

**\*muramyl dipeptide: PD, pharmacology**

**\*uridine: IT, drug interaction**

**\*uridine: PD, pharmacology**

RN (uridine) 58-96-8

CO Peptide institute (Japan)

L59 ANSWER 16 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

AN 92246062 EMBASE

DN 1992246062

TI Effects of uridine in the treatment of diabetic neuropathy: An electrophysiological study.

AU Gallai V.; Mazzotta G.; Montesi S.; Sarchielli P.; Del Gatto F.

CS Department of Neurology, University of Perugia, Casella Postale 27,06100 Perugia, Italy

SO Acta Neurologica Scandinavica, (1992) 86/1 (3-7).

ISSN: 0001-6314 CODEN: ANRSAS

CY Denmark

DT Journal; Article

FS 003 Endocrinology

008 Neurology and Neurosurgery

030 Pharmacology

037 Drug Literature Index

LA English

SL English

AB The authors performed a controlled double-blind neurophysiological study (uridine vs placebo) in 40 diabetic patients with peripheral neuropathy. Twenty subjects were treated with uridine and 20 with placebo. The neurophysiological evaluation consisted of a study of the MCV of the median nerve, the common Peroneal, the posterior Tibial, the SCV of the radial nerve, the median and the sural as well as the amplitudes of the motor and sensory responses. The nerves examined were on the dominant side. The evaluations were performed at baseline and after 60, 120, 180 days of therapy with a follow up control after 90 days from the completion of therapy. No statistically significant modifications were observed in the placebo group. In the drug group, the neurophysiological parameters improved significantly from the 120th day post therapy compared with baseline and were maintained through to follow up. The authors discuss the results which demonstrated that treatment with uridine can bring about a neurophysiological improvement in peripheral nerves.

CT Medical Descriptors:

**\*diabetic neuropathy: DT, drug therapy**

adult

article

clinical article

female

human

male

**nerve conduction**

priority journal

Drug Descriptors:

**\*uridine: PD, pharmacology**

**\*uridine: DT, drug therapy**

RN (uridine) 58-96-8

L59 ANSWER 17 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

AN 91345012 EMBASE

DN 1991345012

TI Central depressant effects of N3-substituted 6-azauridines in mice.

AU Koshigami M.; Watanabe K.; Kimura T.; Yamamoto I.

CS Faculty of Pharmaceutical Sciences, Hokuriku University, 3-Ho  
Kanagawa-machi, Kanazawa 920-11, Japan

SO Chemical and Pharmaceutical Bulletin, (1991) 39/10 (2597-2599).

ISSN: 0009-2363 CODEN: CPBTAL

CY Japan

DT Journal; Article

FS 030 Pharmacology

037 Drug Literature Index

LA English

SL English

AB Central depressant effects in mice of N3-substituted 6-azauridines (6-AzUd) (1) were examined by intracerebroventricular (i.c.v.) injection. Eleven derivatives including alkyl-, benzyl-, xylyl- and phenylethyl-substitution onto the N3-position of 1 were synthesized and their pharmacological effects were evaluated using hypnotic activity, locomotor activity, motor incoordination and pentobarbital-induced sleep prolongation as indices. Six of 12 compounds showed the hypnotic activity. At a dose of 2 .mu.mol/mouse, the mean sleeping time induced by 1, N3-benzyl-6-AzUd (7), N3-o-xylyl-6-AzUd (8), N3-m-xylyl-6-AzUd (9), N3-p-xylyl-6-AzUd (10) and N3-.alpha.-phenylethyl-6-AzUd (11) was 14, 11, 45, 12, 9 and 16 min, respectively. These derivatives and N3-.beta.-phenylethyl-6-AzUd (12) (1.5 .mu.mol/mouse) significantly prolonged pentobarbital-induced (40 mg/kg, i.p.) sleeping time, whereas none of the N3-alkylated derivatives (methyl-, ethyl-, n-propyl-, n-butyl- and allyl-substitution) exerted the hypnotic activity or pentobarbital-induced sleep prolongation. Nucleoside 1 and its xylyl-derivatives (1.5 .mu.mol/mouse) significantly decreased locomotor activity of mice, their effects paralleled the hypnotic activity. These compounds (1.5 .mu.mol/mouse) also produced motor incoordination and potentiated the effect of diazepam-induced motor incoordination. These results indicate that 1 and its benzyl-related derivatives, but not alkyl-derivatives have a depressant effect on the central nervous system.

CT Medical Descriptors:

**\*hypnosis**

\*locomotion

**\*sleep time**

animal experiment

article

controlled study

drug synthesis

**intracerebroventricular drug administration**

**intraperitoneal drug administration**

male

mouse

nonhuman

Drug Descriptors:

**\*azauridine: IT, drug interaction**

\*azauridine: CB, drug combination  
 \*azauridine: AN, drug analysis  
 \*azauridine: DV, drug development  
 \*azauridine: CM, drug comparison  
 \*azauridine derivative: CM, drug comparison  
 \*azauridine derivative: DV, drug development  
 \*azauridine derivative: AN, drug analysis  
 \*azauridine derivative: CB, drug combination  
 \*azauridine derivative: IT, drug interaction  
 \*uridine derivative: IT, drug interaction  
 \*uridine derivative: CM, drug comparison  
 \*uridine derivative: DV, drug development  
 \*uridine derivative: AN, drug analysis  
 \*uridine derivative: CB, drug combination  
 diazepam: IT, drug interaction  
 diazepam: CM, drug comparison  
 diazepam: CB, drug combination  
 pentobarbital: IT, drug interaction  
 pentobarbital: CM, drug comparison  
 pentobarbital: CB, drug combination

RN (azauridine) 54-25-1; (diazepam) 439-14-5; (pentobarbital) 57-33-0, 76-74-4

CO Aldrich; Yamanouchi pharmaceutical

L59 ANSWER 18 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

AN 90236188 EMBASE

DN 1990236188

TI Memory deficits of aged male rats can be improved by pyrimidine nucleosides and n-acetyl-glutamine.

AU Drago F.; D'Agata V.; Valerio C.; Spadaro F.; Raffaele R.; Nardo L.; Grassi M.; Freni V.

CS Institute of Pharmacology, University of Catania Medical School, Viale A. Doria 6, 95125 Catania, Italy

SO Clinical Neuropharmacology, (1990) 13/4 (290-296).

ISSN: 0362-5664 CODEN: CLNEDB

CY United States

DT Journal; Article

FS 008 Neurology and Neurosurgery

020 Gerontology and Geriatrics

030 Pharmacology

037 Drug Literature Index

LA English

SL English

AB The pyrimidine nucleosides uridine (URI) and cytidine (CYT), alone or associated with n-acetyl-glutamine (NAG), were injected acutely or subchronically to aged (26 months old) male rats of the Sprague-Dawley strain. Learning and memory abilities of the animals were studied with tests of avoidance behavior. The acquisition of active avoidance behavior was studied with the shuttle-box test. A step-through type of passive avoidance task was used to examine the retention of passive avoidance responses. The acquisition of the active avoidance behavior and the retention of the passive avoidance response were reduced in aged animals as compared with those of young animals. Neither the acute treatment of old rats with URI and CYT alone nor that associated with NAG exerted any effect on the behavioral tests. In contrast, the subchronic treatment with URI and CYT was followed by a facilitation of acquisition of active avoidance behavior in the shuttle box and of retention of passive avoidance responses in the dark box. A more potent effect on the acquisition of the shuttle-box behavior and on the retention of passive avoidance reaction was found in animals treated subchronically with the pyrimidine nucleosides associated with NAG. These effects may be related to the role of pyrimidines in the synthesis of ribonucleic acid, which is indispensable for learning and memory processes.

CT Medical Descriptors:

\*memory

aged

rat  
animal experiment  
nonhuman  
male  
**intraperitoneal drug administration**  
article  
priority journal  
Drug Descriptors:  
**\*cytokine: PD, pharmacology**  
**\*aceglutamide: PD, pharmacology**  
**\*uridine: PD, pharmacology**  
RN (aceglutamide) 2490-97-3; (uridine) 58-96-8

L59 ANSWER 19 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.  
AN 89176684 EMBASE  
DN 1989176684  
TI Effects of chronic treatment with uridine on striatal dopamine release and dopamine related behaviours in the absence or the presence of chronic treatment with haloperidol.  
AU Agnati L.F.; Fuxe K.; Ruggeri M.; Pich E.M.; Benfenati F.; Volterra V.; Ungerstedt U.; Zini I.  
CS Institute of Human Physiology, University of Modena, 41100 Modena, Italy  
SO Neurochemistry International, (1989) 15/1 (107-113).  
ISSN: 0197-0186 CODEN: NEUIDS  
CY United Kingdom  
DT Journal  
FS 002 Physiology  
030 Pharmacology  
008 Neurology and Neurosurgery  
037 Drug Literature Index  
LA English  
SL English  
AB Uridine (15 mg/kg/day, i.p.), haloperidol (1 mg/kg/day, i.p.), uridine (15 mg/kg/day, i.p.) plus haloperidol (1 mg/kg/day, i.p.) or saline have been chronically administered to Sprague-Dawley male rats. Following 1 week of wash-out, the effects of these treatments on basal striatal dopamine (DA) release as well as on the DA release induced by an acute haloperidol challenge (2 mg/kg, i.p.) were studied by means of intracerebral microdialysis. Behavioural tests such as haloperidol-induced catalepsy or apomorphine-induced stereotypies were also performed 4-7 days after drug withdrawal. The chronic treatment with uridine alone or associated with haloperidol markedly reduced DA release induced by an acute haloperidol challenge. The behavioural studies also indicated a change in DA-related behaviours in these conditions. The animals chronically treated with uridine showed significant increases in the stereotypy scores and in the catalepsy induced by an acute haloperidol challenge with respect to saline treated rats. The present results indicate that a chronic uridine treatment is able to potentiate the reduction of the striatal DA transmission induced by acute and chronic haloperidol treatment. This finding suggests the possibility to reduce the neuroleptic dose in the treatment of schizophrenia by combining neuroleptic and uridine treatments, thus making it possible to relieve some of the side effects of neuroleptic therapy.  
CT Medical Descriptors:  
**\*behavior**  
**\*corpus striatum**  
**\*dopamine release**  
rat  
**schizophrenia**  
**psychological aspect**  
nonhuman  
animal experiment  
male  
**intraperitoneal drug administration**  
priority journal  
Drug Descriptors:

\*haloperidol: PD, pharmacology  
 \*haloperidol: CB, drug combination  
 \*uridine: PD, pharmacology  
 \*uridine: CB, drug combination

RN (haloperidol) 52-86-8; (uridine) 58-96-8  
 CN (1) Serenase  
 CO (1) Istituto lusofarmaco (Italy)

L59 ANSWER 20 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

AN 89027832 EMBASE

DN 1989027832

TI Effects of chronic uridine treatment on regional neuropeptide and tyrosine hydroxylase-like immunoreactivities in the brain of 12 month-old male rats.

AU Zoli M.; Agnati L.F.; Fuxe K.; Cintra A.; Grimaldi R.; Vanderhaeghen J.J.; Eneroth P.; Goldstein M.

CS Institute of Human Physiology, University of Modena, 41100 Modena, Italy

SO Neurochemistry International, (1988) 13/4 (499-508).

ISSN: 0197-0186 CODEN: NEUIDS

CY United Kingdom

DT Journal

FS 001 Anatomy, Anthropology, Embryology and Histology

003 Endocrinology

037 Drug Literature Index

LA English

SL English

AB Uridine was administered in the drinking water (0.5 mg/ml) in adult 6 month-old rats for 6 months. The mean daily dose of uridine was 12.5 mg/rat. The effects of this treatment on tyrosine hydroxylase, galanin, somatostatin, neuropeptide Y and cholecystokinin-like immunoreactivities were studied by means of semiquantitative immunocytochemistry using the peroxidase-antiperoxidase procedure in combination with image analysis. A decrease of somatostatin, cholecystokinin and galanin-like immunoreactivities in nerve terminals was observed in various brain areas of 12 month-old animals compared with 3 month-old animals, while the levels of tyrosine hydroxylase-like immunoreactivity were unchanged. Uridine-treated animals showed a decrease of galanin, neuropeptide Y and cholecystokinin-like immunoreactivities in nerve terminals of some diencephalic areas and an increase of cholecystokinin-like immunoreactivity in nerve terminals of most of the telencephalic brain areas in comparison with vehicle treated animals of the same age. It is suggested that the pyrimidine nucleoside uridine can affect the synthesis and/or degradation of mRNAs involved in the synthesis of neuropeptide via direct nuclear actions and/or indirect actions involving effects on receptor activated phosphoinositide metabolism. Uridine offers a new way to modulate central peptide synapses.

CT Medical Descriptors:

\*brain region

cytochemistry

rat

animal experiment

animal cell

nonhuman

male

oral drug administration

priority journal

Drug Descriptors:

\*neuropeptide

\*tyrosine 3 monooxygenase

messenger rna

\*uridine: PD, pharmacology

RN (tyrosine 3 monooxygenase) 9036-22-0; (uridine) 58-96-8

L59 ANSWER 21 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

AN 88147812 EMBASE

DN 1988147812

TI Chronic uridine treatment reduces the level of [3H]spiperone-labelled dopamine receptors and enhances their turnover rate in striatum of young rats: Relationship to dopamine-dependent behaviours.  
 AU Farabegoli C.; Pich E.M.; Cimino M.; Agnati L.F.; Fuxe K.  
 CS Institute of Human Physiology, University of Modena, Modena, Italy  
 SO Acta Physiologica Scandinavica, (1988) 132/2 (209-216).  
 ISSN: 0001-6772 CODEN: APSCAX  
 CY Sweden  
 DT Journal  
 FS 002 Physiology  
 008 Neurology and Neurosurgery  
 030 Pharmacology  
 037 Drug Literature Index  
 LA English  
 SL English  
 AB The effect was studied of chronic uridine treatment on the recovery of striatal D-2 dopamine (DA) receptors after their irreversible blockade by N-ethoxycarbonyl-2-ethoxy-1,2-dihydroquinoline (EEDQ) in young (40 days old) and adult (14 months old) male rats using [3H]spiperone as radioligand. Chronic uridine treatment (15 mg kg<sup>-1</sup> day<sup>-1</sup>, i.p., 14 days) causes a reduction of [3H]spiperone binding sites in striatum of young rats. This treatment also produces an increase in the rate of recovery of striatal [3H]spiperone-labelled DA receptors in young, but not in adult rats. Catalepsy and exploratory locomotor activity, two behaviours associated with blockade versus activation of DA receptors, were evaluated in the same rats. The behavioural recovery from the EEDQ-induced syndrome is more rapid in the young rats treated with uridine than in the saline-treated group. The behavioural recovery in old rats was not affected by chronic uridine treatment. Thus, in young rats the pyrimidine nucleoside uridine may modulate the steady state and the turnover rate of striatal D-2 DA receptors.  
 CT Medical Descriptors:  
 \*catalepsy  
 \*corpus striatum  
 \*locomotion  
 age  
 rat  
 priority journal  
 animal experiment  
 animal cell  
 nonhuman  
 male  
 intraperitoneal drug administration  
 Drug Descriptors:  
 \*dopamine receptor  
 \*2 ethoxy 1(2h) quinolinecarboxylic acid ethyl ester: PD,  
 pharmacology  
 \*spiperone: PD, pharmacology  
 \*uridine: PD, pharmacology  
 RN (2 ethoxy 1(2h) quinolinecarboxylic acid ethyl ester) 16357-59-8;  
 (spiperone) 749-02-0; (uridine) 58-96-8  
 CO Sigma (United States)  
 L59 ANSWER 22 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.  
 AN 87234969 EMBASE  
 DN 1987234969  
 TI N-substituted oxopyrimidines and nucleosides: Structure-activity relationship for hypnotic activity as central nervous system depressant.  
 AU Yamamoto I.; Kimura T.; Tateoka Y.; Watanabe K.; Ho I.K.  
 CS Department of Hygienic Chemistry, School of Pharmacy, Hokuriku University, Kanazawa 920-11, Japan  
 SO Journal of Medicinal Chemistry, (1987) 30/12 (2227-2231).  
 ISSN: 0022-2623 CODEN: JMCMAR  
 CY United States  
 DT Journal  
 FS 008 Neurology and Neurosurgery

030 Pharmacology  
037 Drug Literature Index  
LA English  
AB N3-Benzyluridine (3-(phenylmethyl)-1-.beta.-D-ribofuranosyluracil) (1f) and its related compounds were synthesized and evaluated for hypnotic activity as central depressants. The primary structural modification has been carried out at the N3 position of the pyrimidine ring in uridine. N3-Benzyl-substituted uridine exhibited hypnotic activity as well as pentobarbital (PB) induced sleep effect on mice when administered by intracerebroventricular (icv) injection. From this result, the secondary modification was performed, namely, converting the benzyl group into a benzyl analogous group. These compounds also showed hypnotic activity, but their intensities were varied. Thirdly, changing the sugar moiety was investigated; however, it was found to be necessary for hypnotic activity. In general, introduction of benzyl analogous groups at the N3 position of uridine increased the hypnotic activity, and modification of the sugar moiety decreased the activity. Intravenous (iv) administration failed to indicate hypnotic activity in most of the compounds tested. However, modified sugars such as 2',3',5'-tri-O-methyl or -acetyl derivatives of 1f elicited hypnotic activity by iv injection. The majority of compounds were found to show potentiation of the PB-induced sleep, and their effects were in parallel with the hypnotic activity. The result clearly indicates that the benzyl group and .beta.-D-ribofuranosyl, at the N3 and N1 positions, respectively, are necessary for hypnotic activity. The critical portion of the chemical structure for both effects appears to be the uridine moiety.

CT Medical Descriptors:  
\*central nervous system depression  
\*hypnosis  
\*sleep  
structure activity relation  
drug analysis  
drug comparison  
animal experiment  
nonhuman  
mouse  
central nervous system  
Drug Descriptors:  
\*3 benzyluridine: AN, drug analysis  
\*3 benzyluridine: DV, drug development  
\*3 benzyluridine: PD, pharmacology  
\*3 benzyluridine: CM, drug comparison  
\*uridine derivative: AN, drug analysis  
\*uridine derivative: DV, drug development  
\*uridine derivative: PD, pharmacology  
\*uridine derivative: CM, drug comparison  
tegafur  
uracil  
unclassified drug

RN (tegafur) 17902-23-7; (uracil) 66-22-8

L59 ANSWER 23 OF 23 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.  
AN 87233360 EMBASE  
DN 1987233360  
TI Hypnotic activity of N3-benzylthymidine on mice.  
AU Yamamoto I.; Kimura T.; Tateoka Y.; Watanabe K.; Ho I.K.  
CS Department of Hygienic Chemistry, School of Pharmacy, Hokuriku University, Kanazawa 920-11, Japan  
SO Life Sciences, (1987) 41/26 (2791-2797).  
ISSN: 0024-3205 CODEN: LIFSAK  
CY United States  
DT Journal  
FS 030 Pharmacology  
037 Drug Literature Index  
LA English  
AB The pharmacological effect in mice of N3-benzylthymidine (N3-ByTd) was examined by two routes of administration; intravenous (i.v.) and



intracerebroventricular (i.c.v.), and compared with the effect of administration of N3-benzyluridine (N3-ByUd) previously reported. Hypnotic activity, pentobarbital (PB)-induced sleeping time, motor incoordination and spontaneous activity were used as indices of pharmacological effects. N3-ByTd (0.5-2.0  $\mu\text{mol}/\text{mouse}$ , i.c.v.) and N3-ByUd (1.5-3.0  $\mu\text{mol}/\text{mouse}$ , i.c.v.) were found to possess dose-dependent hypnotic activity, and N3-ByTd had more potent hypnotic activity than N3-ByUd. Both N3-ByTd and N3-ByUd (0.5 and 1.0  $\mu\text{mol}/\text{mouse}$ , i.c.v., respectively) showed a synergistic effect on PB-induced sleep, although their parent compounds, thymidine (Td) and uridine (Ud), did not potentiate the activity at each dose. In motor incoordination, the effect of N3-ByTd (0.5  $\mu\text{mol}/\text{mouse}$ ) continued for 6 hr after i.c.v. injection. All compounds decreased the spontaneous activity of mice by i.c.v. administration. Furthermore, both N3-ByTd and N3-ByUd decreased the activity, when they were administered i.v. These results reveal that both N3-benzylpyrimidine nucleosides have more direct depressant effects on the central nervous system (CNS) than the parent compounds. Among the pyrimidine nucleoside derivatives tested, N3-ByTd was found to be the most potent hypnotic substance.

CT Medical Descriptors:

**\*central nervous system depression**

**\*sleep time**

**drug comparison**

preliminary communication

nonhuman

**central nervous system**

mouse

animal experiment

Drug Descriptors:

**\*hypnotic agent**

**\*thymidine: PD, pharmacology**

**\*thymidine: CM, drug comparison**

**\*uridine: PD, pharmacology**

**\*uridine: CM, drug comparison**

RN (thymidine) 50-89-5; (uridine) 58-96-8

CO Wako (Japan); Kohjin (Japan)

=> fil biosis

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|     |                        |
|-----|------------------------|
| L60 | 3730 S L1              |
| L61 | 78 S L60 AND 0700?/CC  |
| L62 | 586 S L60 AND 12100/CC |
| L63 | 68 S L60 AND 1750?/CC  |
| L64 | 372 S L60 AND 2050?/CC |
| L65 | 61 S L60 AND 2100?/CC  |
| L66 | 922 S L61-L65          |
| L67 | 96 S L66 AND 12512/CC  |

L68 358 S L66 AND 220?/CC  
 L69 372 S L67,L68  
 L70 368 S L69 AND PY<=1998  
 L71 43 S L70 AND 00520/CC  
 L72 64 S L70 AND (CONFERENCE? OR CONGRESS? OR POSTER? OR SYMPOS? OR ME  
 L73 4 S L70 AND MEET/SO  
 L74 64 S L71-L73  
 L75 8 S L74 AND (ORAL URIDINE OR URIDINE COADMINISTRATION OR SCLEROSI  
 L76 12 S L70 AND \*12512/CC  
 L77 94 S L70 AND (\*22005 OR \*22024 OR \*22026)/CC  
 L78 74 S L76,L77 NOT L74  
 L79 18 S L78 AND (LEARNING OR PSYCHOTROP? OR AVOIDANC? OR ROTATION OR  
 L80 26 S L75,L79

FILE 'BIOSIS' ENTERED AT 08:52:37 ON 08 AUG 2000

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L80 ANSWER 1 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS  
 AN 1997:405298 BIOSIS  
 DN PREV199799711501  
 TI A longitudinal study of **cognitive** functioning in patients with  
 classical galactosaemia, including a cohort treated with oral uridine.  
 AU Manis, F. R. (1); Cohn, L. B.; McBride-Chang, C.; Wolff, J. A.; Kaufman,  
 F. R.  
 CS (1) Dep. Psychol., Univ. Southern California, Los Angeles, CA 90089-1061  
 USA  
 SO Journal of Inherited Metabolic Disease, (1997) Vol. 20, No. 4, pp.  
549-555.  
 ISSN: 0141-8955.  
 DT Article  
 LA English  
 AB Existing longitudinal data on patients with classical galactosaemia  
 suggests that neurocognitive functioning is impaired and, in isolated case  
 reports, may show a decline in performance over time. The present study  
 explored whether there are long-term changes in cognitive abilities in  
 patients with galactosaemia and whether oral uridine can improve  
 neurocognitive performance. Thirty-five patients (18 males, 17 females),  
 29 of whom received oral uridine powder at 150 mg/kg per day (divided  
 dose, three times daily), were evaluated over a 2-5-year period with the  
 Woodcock-Johnson Revised Cognitive Abilities Test, three academic  
 achievement tests, and the Beery Test of Visual Motor Integration. Results  
 showed that the uridine cohort and a comparison group that received only  
 dietary restriction made small gains in cognitive performance over the  
 treatment period and the size of the gains did not differ significantly.  
 Seven subjects who started uridine prior to the age of 14 months did not  
 differ significantly in their cognitive test scores at an average age of  
 3.5 years from a group of older children who had begun treatment at 4.5  
 years of age. These results provide no support for any developmental or  
 uridine-treatmentrelated chance in cognitive functioning for this sample  
 of galactosaemic subjects.  
 CC **Behavioral Biology - Human Behavior 07004**  
**Pathology, General and Miscellaneous - Therapy 12512**  
 Metabolism - Carbohydrates \*13004  
 Metabolism - Metabolic Disorders \*13020  
**Psychiatry - Psychophysiology \*21003**  
**Pharmacology - Drug Metabolism; Metabolic Stimulators \*22003**  
**Pharmacology - Clinical Pharmacology \*22005**  
 BC Hominidae \*86215  
 IT Major Concepts  
 Behavior; Metabolism; Pharmacology  
 IT Chemicals & Biochemicals  
 URIDINE  
 IT Miscellaneous Descriptors  
 BEHAVIOR; COGNITIVE FUNCTION; GALACTOSEMIA; GENETIC DISEASE; METABOLIC

DISEASE; METABOLIC-DRUG; METABOLISM; ORAL DOSAGE; PATIENT;  
PHARMACOLOGY; URIDINE

ORGN Super Taxa

Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name

human (Hominidae)

ORGN Organism Superterms

animals; chordates; humans; mammals; primates; vertebrates

RN 58-96-8 (URIDINE)

L80 ANSWER 2 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS

AN 1996:466219 BIOSIS

DN PREV199699188575

TI Multi-infarct **dementia**: Modification of the P300

**cognitive** event-related potential in patients treated with the  
association of cytidine and uridine.

AU Gallai, V.; Alberti, A.; Mazzotta, G.

CS Clin. Neurol., Univ. degli Studi, Perugia Italy

SO Rivista di Neuropsichiatria e Scienze Affini, (1995) Vol. 41, No. 1, pp.

1-9

ISSN: 0035-6352.

DT Article

LA Italian

SL Italian; English

AB In Italy as in all western countries the mean age of the population is increasing progressively with consequent increase of the degenerative pathologies of the central nervous system, making extremely important the question of the cognitive decline. Although the majority of the dementia syndromes are due to Alzheimer's disease and Alzheimer type, another important cause of dementia is Multi Infarct Dementia (MID), which is related to alterations of the cerebral blood flow. The present study was designed to evaluate the efficacy of Cytidine and Uridine in subjects with reduced mental capacity following to MID by means the event-related potential P300. The P300 is a neurophysiological method used to investigate cerebral electrical activity in the cognitive processing of information analysis. This potential was found to be altered in subjects affected by dementia. The present study was performed in 20 patients affected by multi-infarct dementia (MID) treated with Cytidine and Uridine. The patients, after a period of washout, were evaluated by electrophysiological examination performed at baseline and after 60 days. The event-related potential P300 was performed by an "odd-ball" paradigm with an acoustic modality; the patients were also assessed with the Digit Span, a sub-test of the Wechsler Adult Intelligence Scale to evaluate attention and short-term memory and with the Mini Mentale State. In the patients examined, the findings relevant to the study of the P300 showed a significant decrease in latency values compared to baseline. On the basis of this investigation it has been demonstrated that the variations in the registrations can be correlated to the improved neuronal activity following treatment with Cytidine and Uridine.

CC **Behavioral Biology - Human Behavior 07004**

Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062

**Pathology, General and Miscellaneous - Therapy \*12512**

Blood, Blood-Forming Organs and Body Fluids - Blood and Lymph Studies  
\*15002

**Nervous System - Physiology and Biochemistry \*20504**

**Nervous System - Pathology \*20506**

**Psychiatry - Psychopathology; Psychodynamics and Therapy \*21002**

**Pharmacology - Clinical Pharmacology \*22005**

**Pharmacology - Neuropharmacology \*22024**

BC Hominidae \*86215

IT Major Concepts

Blood and Lymphatics (Transport and Circulation); Nervous System  
(Neural Coordination); Neurology (Human Medicine, Medical Sciences);  
Pathology; Pharmacology; Psychiatry (Human Medicine, Medical Sciences)

IT Chemicals & Biochemicals

CYTIDINE; URIDINE

IT Miscellaneous Descriptors  
AUTONOMIC-DRUG; BEHAVIORAL AND MENTAL DISORDERS; CEREBRAL BLOOD FLOW;  
CYTIDINE; MULTI-INFARCT DEMENTIA; NERVOUS SYSTEM DISEASE; NEUROLOGY;  
PATIENT; PHARMACOLOGY; P300 COGNITIVE EVENT-RELATED POTENTIAL; URIDINE

ORGN Super Taxa  
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name  
human (Hominidae)

ORGN Organism Superterms  
animals; chordates; humans; mammals; primates; vertebrates

RN 65-46-3 (CYTIDINE)  
58-96-8 (URIDINE)

L80 ANSWER 3 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS

AN 1996:26741 BIOSIS

DN PREV199698598876

TI Uridine reduces **rotation** induced by L-dopa and methamphetamine  
in 6-OHDA-treated rats.

AU Myers, Carol S.; Fisher, Hans; Wagner, George C. (1)

CS (1) Dep. Psychol., Busch Campus, Rutgers Univ., New Brunswick, NJ 08903  
USA

SO Pharmacology Biochemistry and Behavior, (1995) Vol. 52, No. 4, pp.  
749-753.  
ISSN: 0091-3057.

DT Article

LA English

AB The pyrimidine nucleoside uridine may reduce side effects associated with  
antipsychotic medication by interacting with dopamine or GABA  
neurotransmission. Male Sprague-Dawley rats were used to investigate  
coadministration of uridine with agents that alter food intake  
(amphetamine, haloperidol, and chlordiazepoxide) and locomotor activity  
(methamphetamine and L-dopa). Results indicated that chronic uridine (32.0  
mg/kg, intraperitoneally (IP)) alone did not alter milk intake or  
reduction of milk intake induced by amphetamine (dose range 0.5-2.0 mg/kg,  
IP) or haloperidol (0.125-1.0 mg/kg, IP), nor did it alter the biphasic  
response induced by chlordiazepoxide (5.0-40.0 mg/kg, IP). However,  
uridine-treated animals with unilateral striatal lesions exhibited no  
rotational behavior in the absence of drug challenge, but showed decreased  
rotation induced by the dopamine agonist, L-dopa (50.0-200.0 mg/kg, IP)  
compared with controls. In addition, uridine-treated rats exhibited  
reduced rotation after repeated injections of methamphetamine (4.0 mg/kg,  
IP) in contrast to increasingly greater rotation observed in control  
animals. These results are further evidence that chronic uridine may alter  
drug-induced dopaminergic activity without exerting effects itself.

CC **Behavioral Biology - Animal Behavior \*07003**  
Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062  
**Nervous System - Pathology \*20506**  
**Psychiatry - Psychopathology; Psychodynamics and Therapy \*21002**  
**Pharmacology - Neuropharmacology \*22024**  
**Pharmacology - Psychopharmacology \*22026**

BC Muridae \*86375

IT Major Concepts  
Behavior; Nervous System (Neural Coordination); Pharmacology

IT Chemicals & Biochemicals  
URIDINE; L-DOPA; METHAMPHETAMINE

IT Miscellaneous Descriptors  
ANTIPSYCHOTIC AGENT; PSYCHOSIS; URIDINE

ORGN Super Taxa  
Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name  
Muridae (Muridae)

ORGN Organism Superterms  
animals; chordates; mammals; nonhuman vertebrates; nonhuman mammals;  
rodents; vertebrates

RN 58-96-8 (URIDINE)  
59-92-7 (L-DOPA)

537-46-2 (METHAMPHETAMINE)

L80 ANSWER 4 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS  
AN 1995:426838 BIOSIS  
DN PREV199598441138  
TI Neurochemical and behavioral effects of haloperidol and risperidone:  
Evaluation of **uridine coadministration** with  
**antipsychotic** drugs.  
AU Myers, C. S.; Michna, L.; Aknay, N.; Fisher, H.; Wagner, G. C.  
CS Dep. Psychol., Rutgers Univ., New Brunswick, NJ 08903 USA  
SO **Society for Neuroscience Abstracts**, (1995) Vol. 21, No. 1-3, pp.  
195.  
Meeting Info.: **25th Annual Meeting of the Society for Neuroscience**  
San Diego, California, USA November 11-16, 1995  
ISSN: 0190-5295.  
DT Conference  
LA English  
CC **General Biology - Symposia, Transactions and Proceedings of**  
**Conferences, Congresses, Review Annuals 00520**  
**Behavioral Biology - Animal Behavior \*07003**  
**Behavioral Biology - Conditioning \*07005**  
Biochemical Studies - General 10060  
Biochemical Studies - Nucleic Acids, Purines and Pyrimidines \*10062  
Biochemical Studies - Proteins, Peptides and Amino Acids 10064  
Metabolism - Proteins, Peptides and Amino Acids \*13012  
Endocrine System - Neuroendocrinology \*17020  
**Nervous System - Physiology and Biochemistry \*20504**  
**Pharmacology - Neuropharmacology \*22024**  
**Pharmacology - Psychopharmacology \*22026**  
Toxicology - Pharmacological Toxicology \*22504  
BC Muridae \*86375  
IT Major Concepts  
Behavior; Biochemistry and Molecular Biophysics; Endocrine System  
(Chemical Coordination and Homeostasis); Metabolism; Nervous System  
(Neural Coordination); Pharmacology; Toxicology  
IT Chemicals & Biochemicals  
HALOPERIDOL; RISPERIDONE; URIDINE; 5-HYDROXYTRYPTAMINE  
IT Miscellaneous Descriptors  
ANTIPSYCHOTIC-DRUG; CONDITIONED AVOIDANCE RESPONSE DISRUPTION;  
EXTRAPYRAMIDAL SIDE EFFECTS; HALOPERIDOL; **MEETING ABSTRACT**;  
**MEETING POSTER**; RISPERIDONE; 5-HYDROXYTRYPTAMINE TURNOVER  
ORGN Super Taxa  
Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia  
ORGN Organism Name  
rat (Muridae)  
ORGN Organism Superterms  
animals; chordates; mammals; nonhuman mammals; nonhuman vertebrates;  
rodents; vertebrates  
RN 52-86-8 (HALOPERIDOL)  
106266-06-2 (RISPERIDONE)  
**58-96-8 (URIDINE)**  
50-67-9 (5-HYDROXYTRYPTAMINE)

L80 ANSWER 5 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS  
AN 1995:237308 BIOSIS  
DN PREV199598251608  
TI Longitudinal neurocognitive data on patients (PTS) with classical  
galactosemia (G), including a cohort treated with **oral**  
**uridine**.  
AU Manis, Frank R. (1); Cohn, Linda; McBride-Chang, Catherine; Wolff, Jon A.;  
Kaufman, Francine R.  
CS (1) Dep. Psychol., USC Sch. Med., Los Angeles, CA USA  
SO Pediatric Research, (1994) Vol. 37, No. 4 PART 2, pp. 150A.  
Meeting Info.: **105th Annual Meeting of the American Pediatric Society**  
**and the 64th Annual Meeting of the Society for Pediatric Research** San  
Diego, California, USA May 7-11, 1995

ISSN: 0031-3998.

DT Conference  
 LA English  
 CC **General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals 00520**  
 Genetics and Cytogenetics - Human \*03508  
 Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062  
 Biochemical Studies - Proteins, Peptides and Amino Acids 10064  
 Biochemical Studies - Carbohydrates 10068  
 Enzymes - Physiological Studies \*10808  
**Pathology, General and Miscellaneous - Therapy \*12512**  
 Metabolism - Carbohydrates \*13004  
 Metabolism - Metabolic Disorders \*13020  
**Nervous System - Pathology \*20506**  
**Psychiatry - Psychopathology; Psychodynamics and Therapy \*21002**  
**Psychiatry - Mental Retardation \*21006**  
**Pharmacology - Drug Metabolism; Metabolic Stimulators \*22003**  
 Pediatrics \*25000  
 BC Hominidae \*86215  
 IT Major Concepts  
 Enzymology (Biochemistry and Molecular Biophysics); Genetics;  
 Metabolism; Neurology (Human Medicine, Medical Sciences); Pathology;  
 Pediatrics (Human Medicine, Medical Sciences); Pharmacology; Psychiatry  
 (Human Medicine, Medical Sciences)  
 IT Chemicals & Biochemicals  
 URIDINE  
 IT Miscellaneous Descriptors  
 IMPAIRED NEUROCOGNITIVE FUNCTIONING; INBORN METABOLIC ERROR;  
**MEETING ABSTRACT; MEETING POSTER; MENTAL RETARDATION;**  
 METABOLIC-DRUG; PEDIATRICS; URIDINE  
 ORGN Super Taxa  
 Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia  
 ORGN Organism Name  
 human (Hominidae)  
 ORGN Organism Superterms  
 animals; chordates; humans; mammals; primates; vertebrates  
 RN **58-96-8 (URIDINE)**

L80 ANSWER 6 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS  
 AN 1995:237301 BIOSIS  
 DN PREV199598251601  
 TI A 5 year study evaluation the use of **oral uridine** in  
 patients (PTS) with classical galactosemia (G.  
 AU Kaufman, Francine R. (1); Xu, Yan-Kang; Ng, Won Gin; Nelson, Marvin D.;  
 Gray, Susan; Wolff, Jon A.  
 CS (1) Dep. Pediatrics, USC Sch. Med., Los Angeles, CA USA  
 SO Pediatric Research, (1994) Vol. 37, No. 4 PART 2, pp. 149A.  
 Meeting Info.: **105th Annual Meeting of the American Pediatric Society**  
**and the 64th Annual Meeting of the Society for Pediatric Research San**  
 Diego, California, USA May 7-11, 1995  
 ISSN: 0031-3998.

DT Conference  
 LA English  
 CC **General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals 00520**  
 Genetics and Cytogenetics - Human \*03508  
 Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062  
 Biochemical Studies - Proteins, Peptides and Amino Acids 10064  
 Biochemical Studies - Carbohydrates 10068  
 Enzymes - Physiological Studies \*10808  
**Pathology, General and Miscellaneous - Therapy \*12512**  
 Metabolism - Carbohydrates \*13004  
 Metabolism - Metabolic Disorders \*13020  
 Reproductive System - Physiology and Biochemistry \*16504  
 Dental and Oral Biology - General; Methods 19001  
**Nervous System - Physiology and Biochemistry \*20504**

**Pharmacology - Drug Metabolism; Metabolic Stimulators \*22003**  
**Pharmacology - Clinical Pharmacology \*22005**  
**Pharmacology - Neuropharmacology \*22024**  
**Pharmacology - Reproductive System; Implantation Studies \*22028**  
 Pediatrics \*25000  
 BC Hominidae \*86215  
 IT Major Concepts  
     Enzymology (Biochemistry and Molecular Biophysics); Genetics;  
     Metabolism; Nervous System (Neural Coordination); Pathology; Pediatrics  
     (Human Medicine, Medical Sciences); Pharmacology; Reproductive System  
     (Reproduction)  
 IT Chemicals & Biochemicals  
     URIDINE; URIDINE DIPHOSPHATE GALACTOSE  
 IT Miscellaneous Descriptors  
     INBORN METABOLIC ERROR; **MEETING ABSTRACT; MEETING**  
     **POSTER; METABOLIC-DRUG; NEUROLOGIC FUNCTION; OVARIAN FUNCTION;**  
     **PEDIATRICS; URIDINE; URIDINE DIPHOSPHATE GALACTOSE**  
 ORGN Super Taxa  
     Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia  
 ORGN Organism Name  
     human (Hominidae)  
 ORGN Organism Superterms  
     animals; chordates; humans; mammals; primates; vertebrates  
 RN **58-96-8 (URIDINE)**  
     2956-16-3 (URIDINE DIPHOSPHATE GALACTOSE)  
  
 L80 ANSWER 7 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS  
 AN 1994:512986 BIOSIS  
 DN PREV199497525986  
 TI Effect of uridine on disruption of conditioned avoidance responding  
     induced by traditional and atypical **antipsychotics**.  
 AU Myers, C. S.; Fisher, H.; Wagner, G. C.  
 CS Dep. Psychol., Rutgers Univ., New Brunswick, NJ 08903 USA  
 SO **Society for Neuroscience Abstracts**, (1994) Vol. 20, No. 1-2, pp.  
     825  
     Meeting Info.: **24th Annual Meeting of the Society for Neuroscience**  
     Miami Beach, Florida, USA November 13-18, 1994  
     ISSN: 0190-5295.  
 DT Conference  
 LA English  
 CC **General Biology - Symposia, Transactions and Proceedings of**  
     **Conferences, Congresses, Review Annuals 00520**  
     **Behavioral Biology - Animal Behavior \*07003**  
     **Behavioral Biology - Conditioning \*07005**  
     Biochemical Studies - General 10060  
     Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062  
     Metabolism - Nucleic Acids, Purines and Pyrimidines \*13014  
     **Nervous System - Physiology and Biochemistry \*20504**  
     **Pharmacology - Neuropharmacology \*22024**  
     **Pharmacology - Psychopharmacology \*22026**  
 BC Muridae \*86375  
 IT Major Concepts  
     Behavior; Metabolism; Nervous System (Neural Coordination);  
     Pharmacology  
 IT Chemicals & Biochemicals  
     URIDINE  
 IT Miscellaneous Descriptors  
     BEHAVIOR; CATECHOLAMINES; **MEETING ABSTRACT; MEETING**  
     **POSTER; MONOAMINES**  
 ORGN Super Taxa  
     Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia  
 ORGN Organism Name  
     rat (Muridae)  
 ORGN Organism Superterms  
     animals; chordates; mammals; nonhuman mammals; nonhuman vertebrates;  
     rodents; vertebrates

RN 58-96-8 (URIDINE)

L80 ANSWER 8 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS

AN 1994:413648 BIOSIS

DN PREV199497426648

TI Anti-human immunodeficiency virus type 1 therapy and peripheral  
**neuropathy**: Prevention of 2',3'-dideoxycytidine toxicity in PC12  
cells, a neuronal model, by uridine and pyruvate.

AU Keilbaugh, Sue A.; Hobbs, Gregory A.; Simpson, Melvin V. (1)

CS (1) Dep. Biochem. Cell Biol., State Univ. New York, Stony Brook, NY  
11794-5215 USA

SO Molecular Pharmacology, (1993) Vol. 44, No. 4, pp. 702-706.

ISSN: 0026-895X.

DT Article

LA English

AB A strategy for preventing or delaying the peripheral neuropathy induced by  
2',3'-dideoxycytidine (ddC) therapy in patients with acquired  
immunodeficiency syndrome was suggested by findings, in two laboratories,  
that cultured avian and mammalian cells devoid of mitochondrial DNA  
continue to replicate at virtually normal rates, provided that the medium  
is supplemented with uridine and pyruvate. Inasmuch as it is likely that a  
depletion of mitochondrial DNA also takes place in neuronal cells exposed  
to ddC, we used PC12 cells, the neuronal model we have reported on  
previously, in an attempt to rescue these cells from the deleterious  
effects of ddC. We first show, using undifferentiated PC12 cells, that DNA  
replication is impaired in mitochondria isolated from cells grown in the  
presence of ddC. Then, using growth rate as a criterion of the well-being  
of the cells, we show that the addition of uridine and pyruvate to  
uninduced cells growing in the presence of ddC results in an average  
rescue efficiency of 51%, based on the uridine/pyruvate-treated control.  
This value increases considerably at substantially higher concentrations  
of uridine alone. Rescue efficiencies of differentiated cells, which do  
not proliferate, were assessed using neurite outgrowth and neurite  
survival as criteria. Here the rescue efficiency is 56%, based on the  
uridine/pyruvate-treated control. In addition, uridine and pyruvate  
prolong the viability of ddC-treated cells and maintain their healthy  
appearance; without these compounds, the ddC-treated cells have an  
abnormal morphology and die off quite rapidly.

CC Cytology and Cytochemistry - Animal \*02506

Biochemical Studies - General 10060

Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062

**Pathology, General and Miscellaneous - Therapy \*12512****Nervous System - Pathology \*20506****Pharmacology - Clinical Pharmacology 22005**

Toxicology - Pharmacological Toxicology \*22504

Immunology and Immunochemistry - Immunopathology, Tissue Immunology  
\*34508

Medical and Clinical Microbiology - Virology \*36006

Chemotherapy - Antiviral Agents \*38506

BC Retroviridae 02623

Hominidae \*86215

IT Major Concepts

Cell Biology; Clinical Immunology (Human Medicine, Medical Sciences);

Infection; Neurology (Human Medicine, Medical Sciences); Pathology;

Pharmacology; Toxicology

IT Chemicals &amp; Biochemicals

2',3'-DIDEOXYCYTIDINE; URIDINE; PYRUVATE

IT Miscellaneous Descriptors

ACQUIRED IMMUNODEFICIENCY SYNDROME; ANTIVIRAL AGENT; MITOCHONDRIAL DNA;

2,3-DIDEOXYCYTIDINE

ORGN Super Taxa

Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia;

Retroviridae: Viruses

ORGN Organism Name

Hominidae (Hominidae); Retroviridae (Retroviridae)

ORGN Organism Superterms



animals; chordates; humans; mammals; microorganisms; primates;  
vertebrates; viruses

RN 7481-89-2 (2',3'-DIDEOXYCYTIDINE)  
58-96-8 (URIDINE)  
57-60-3 (PYRUVATE)

L80 ANSWER 9 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS  
AN 1994:413626 BIOSIS  
DN PREV199497426626  
TI Uridine potentiates haloperidol's disruption of conditioned  
**avoidance** responding.  
AU Myers, Carol S.; Fisher, Hans; Wagner, George C. (1)  
CS (1) Dep. Psychol., Rutgers Univ., New Brunswick, NJ 08903 USA  
SO Brain Research, (1994) Vol. 651, No. 1-2, pp. 194-198.  
ISSN: 0006-8993.  
DT Article  
LA English  
AB The pyrimidine nucleoside, uridine, has been proposed as a potential  
supplement in the treatment of psychosis based on its ability to reduce  
haloperidol-induced dopamine release. These experiments investigated the  
effect of uridine (32 mg/kg, i.p.) coadministered with the neuroleptic  
haloperidol, on rats engaged in one way conditioned avoidance responding.  
Uridine itself had no effect on animals' performance, while haloperidol  
(dose range 0.05-0.4 mg/kg, i.p., 90 min before test session) decreased  
number of avoidances and increased avoidance and escape latencies in a  
dose-dependent manner. When coadministered with haloperidol, uridine  
significantly potentiated the disruption of avoidance and avoidance  
latency induced by haloperidol. This potentiation was still evident after  
chronic (27 days) uridine treatment. Importantly, coadministration of  
uridine did not potentiate haloperidol-induced increase of escape latency.  
The potentiation of haloperidol-induced disruption of conditioned  
avoidance responding suggests that uridine coadministration might enhance  
the antipsychotic action of traditional neuroleptics. This would allow for  
a reduction in the therapeutic dose of the antipsychotic, thereby reducing  
side effect frequency.

CC **Behavioral Biology - Animal Behavior \*07003**  
**Behavioral Biology - Conditioning 07005**  
Biochemical Studies - General 10060  
Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062  
**Movement \*12100**  
**Pathology, General and Miscellaneous - Therapy 12512**  
**Nervous System - Pathology \*20506**  
**Pharmacology - Psychopharmacology \*22026**  
Toxicology - Pharmacological Toxicology \*22504

BC Muridae \*86375  
IT Major Concepts  
Behavior; Nervous System (Neural Coordination); Pharmacology;  
Physiology; Toxicology  
IT Chemicals & Biochemicals  
URIDINE; HALOPERIDOL  
IT Miscellaneous Descriptors  
ANTIPSYCHOTIC; DYSKINESIA; HALOPERIDOL; PHARMACEUTICAL ADJUNCT;  
PSYCHOSIS; TOXICITY; URIDINE

ORGN Super Taxa  
Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia  
ORGN Organism Name  
rat (Muridae)  
ORGN Organism Superterms  
animals; chordates; mammals; nonhuman mammals; nonhuman vertebrates;  
rodents; vertebrates

RN 58-96-8 (URIDINE)  
52-86-8 (HALOPERIDOL)

L80 ANSWER 10 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS  
AN 1994:5041 BIOSIS  
DN PREV199497018041

TI Protective effects of uridine on methamphetamine-induced **dopamine depletions.**

AU Myers, C. S.; Wagner, G. C.

CS Dep. Psychol., Rutgers Univ., New Brunswick, NJ 08903 USA

SO **Society for Neuroscience Abstracts**, (1993) Vol. 19, No. 1-3, pp. 405.

Meeting Info.: **23rd Annual Meeting of the Society for Neuroscience**  
Washington, D.C., USA November 7-12, 1993  
ISSN: 0190-5295

DT Conference

LA English

CC **General Biology - Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals 00520**  
Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062  
Biochemical Studies - Proteins, Peptides and Amino Acids 10064  
Endocrine System - Neuroendocrinology \*17020  
**Nervous System - Physiology and Biochemistry \*20504**  
**Nervous System - Pathology \*20506**  
**Pharmacology - Neuropharmacology \*22024**  
Toxicology - Antidotes and Preventative Toxicology \*22505

BC Muridae \*86375

IT Major Concepts  
Endocrine System (Chemical Coordination and Homeostasis); Nervous System (Neural Coordination); Pharmacology; Toxicology

IT Chemicals & Biochemicals  
URIDINE; METHAMPHETAMINE; DOPAMINE

IT Miscellaneous Descriptors  
**MEETING ABSTRACT; MEETING POSTER**

ORGN Super Taxa  
Muridae: Rodentia, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name  
rat (Muridae)

ORGN Organism Superterms  
animals; chordates; mammals; nonhuman mammals; nonhuman vertebrates; rodents; vertebrates

RN **58-96-8 (URIDINE)**  
537-46-2 (METHAMPHETAMINE)  
51-61-6 (DOPAMINE)

L80 ANSWER 11 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS

AN 1992:480655 BIOSIS

DN BA94:112030

TI EFFECTS OF URIDINE IN THE TREATMENT OF **DIABETIC NEUROPATHY** AN ELECTROPHYSIOLOGICAL STUDY.

AU GALLAI V; MAZZOTTA G; MONTESI S; SARCHIELLI P; DEL GATTO F

CS UNIV. PERUGIA, CASELLA POSTALE 27, 06100 PERUGIA SUCC. 3, ITALY.

SO **ACTA NEUROL SCAND**, (1992) 86 (1), 3-7.  
CODEN: ANRSAS. ISSN: 0001-6314.

FS BA; OLD

LA English

AB The authors performed a controlled double-blind neurophysiological study (uridine vs placebo) in 40 diabetic patients with peripheral neuropathy. Twenty subjects were treated with uridine and 20 with placebo. The neurophysiological evaluation consisted of a study of the MCV of the median nerve, the common Peroneal, the **posterior** Tibial, the SCV of the radial nerve, the median and the sural as well as the amplitudes of the motor and sensory responses. The nerves examined were on the dominant side. The evaluations were performed at baseline and after 60, 120, 180 days of therapy with a follow up control after 90 days from the completion of therapy. No statistically significant modifications were observed in the placebo group. In the drug group, the neurophysiological parameters improved significantly from the 120th day post therapy compared with baseline and were maintained through to follow up. The authors discuss the results which demonstrated that treatment with uridine can bring about a neurophysiological improvement in peripheral nerves.

CC Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062

Biochemical Studies - Carbohydrates 10068  
**Pathology, General and Miscellaneous - Therapy \*12512**  
Metabolism - Carbohydrates \*13004  
Metabolism - Metabolic Disorders \*13020  
Endocrine System - Pancreas \*17008  
**Muscle - Pathology \*17506**  
Sense Organs, Associated Structures and Functions - Pathology \*20006  
**Nervous System - Pathology \*20506**  
**Pharmacology - Drug Metabolism; Metabolic Stimulators \*22003**  
**Pharmacology - Clinical Pharmacology \*22005**  
BC Hominidae 86215  
IT Miscellaneous Descriptors  
HUMAN METABOLIC-DRUG MOTOR CONDUCTION SENSORY CONDUCTION PERIPHERAL  
NEUROPATHY  
RN 58-96-8 (URIDINE)

L80 ANSWER 12 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS  
AN 1991:369905 BIOSIS  
DN BA92:58130  
TI PHARMACOLOGICAL ANALYSIS OF THE **ANXIOLYTIC** ACTIVITY OF URIDINE.  
AU KARKISHCHENKO N N; KHAITIN M I; SIMKINA YU N  
CS LAB. MOL. PHARMACOL., RES. INST. PHYS. ORG. CHEM., ROSTOV UNIV.,  
ROSTOV-NA-DONU 344104, USSR.  
SO FARMAKOL TOKSIKOL (MOSC), (1991) 54 (1), 16-18.  
CODEN: FATOAO. ISSN: 0014-8318.  
FS BA; OLD  
LA Russian  
AB The effects of prazosin (0.6 and 3 mg/kg), propranolol (5 mg/kg),  
haloperidol (0.1 and 0.5 mg/kg) and ciproheptaline (0.3 and 0.6 mg/kg) on  
the anxiolytic (anticonflict) action of a pyrimidine ribonucleoside  
uridine, a hypothetic endogenic regulator of anxiety states were studied  
in the experiments on male CBWA mice. It was found that the degree of the  
anxiolytic effect of uridine decreases at the blockade of .alpha.1,  
.beta.2, D2 and H-receptors and significantly increases at the blockade of  
5-HT2-receptors. This suggests the involvement of the mentioned receptors  
in the processes of realization of uridine anxiolytic activity as well as  
the presence of the central serotonin-negative component in the mechanisms  
of action of uridine.

CC Cytology and Cytochemistry - Animal \*02506  
**Behavioral Biology - Animal Behavior \*07003**  
Biochemical Studies - General 10060  
Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062  
Biochemical Studies - Proteins, Peptides and Amino Acids 10064  
Biophysics - Membrane Phenomena \*10508  
Physiology, General and Miscellaneous - Methods \*12006  
**Nervous System - Physiology and Biochemistry \*20504**  
**Psychiatry - Psychopathology; Psychodynamics and Therapy \*21002**  
**Psychiatry - Psychophysiology \*21003**  
**Pharmacology - Neuropharmacology \*22024**  
**Pharmacology - Psychopharmacology \*22026**  
BC Muridae 86375  
IT Miscellaneous Descriptors  
MOUSE PHARMACOLOGICAL TOOLS ANXIETY ENDOGENOUS REGULATION  
ALPHA-1-ADRENOCEPTOR BETA-2-ADRENOCEPTOR DOPAMINE D2 RECEPTOR HISTAMINE  
H1 RECEPTOR 5 HYDROXYTRYPTAMINE-2 RECEPTOR SEROTONIN  
PHARMACOTHERAPEUTIC RELEVANCE  
RN 50-67-9 (SEROTONIN)  
51-45-6 (HISTAMINE)  
51-61-6 (DOPAMINE)  
58-96-8 (URIDINE)

L80 ANSWER 13 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS  
AN 1991:80007 BIOSIS  
DN BR40:33992  
TI PYRIMIDINE DERIVATIVES **PSYCHOTROPIC** PROPERTIES AND MOLECULAR  
MECHANISMS OF CENTRAL ACTION.

AU KARKISHCHENKO N N; MAKLYAKOV YU S; STRADOMSKII B V  
CS DIV. PHARMACOL. CLIN. PHARMACOL., ROSTOV MED. INST., 344022  
ROSTOV-NA-DONU, USSR.  
SO Farmakol. Toksikol. (Moscow), (1990) 53 (4), 67-72.  
CODEN: FATOAO. ISSN: 0014-8318.  
FS BR; OLD  
LA Russian  
CC Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062  
Biochemical Studies - Proteins, Peptides and Amino Acids 10064  
Biophysics - Molecular Properties and Macromolecules \*10506  
Biophysics - Membrane Phenomena \*10508  
Endocrine System - Neuroendocrinology \*17020  
Nervous System - Physiology and Biochemistry \*20504  
Nervous System - Pathology \*20506  
Psychiatry - Psychopathology; Psychodynamics and Therapy \*21002  
Pharmacology - Drug Metabolism; Metabolic Stimulators \*22003  
Pharmacology - Neuropharmacology \*22024  
Pharmacology - Psychopharmacology \*22026  
BC Hominidae 86215  
IT Miscellaneous Descriptors  
REVIEW HUMAN URIDINE ANTIDEPRESSANT-DRUG TRANQUILIZER-DRUG  
BENZODIAZEPINE GAMMA AMINO BUTYRIC ACID IMIPRAMINE RECEPTOR  
PSYCHONEUROLOGICAL DISTURBANCE PHARMACODYNAMICS  
RN 50-49-7 (IMIPRAMINE)  
56-12-2 (GAMMA AMINO BUTYRIC ACID)  
58-96-8 (URIDINE)  
289-95-2D (PYRIMIDINE)  
12794-10-4 (BENZODIAZEPINE)  
L80 ANSWER 14 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS  
AN 1990:430316 BIOSIS  
DN BA90:91117  
TI MEMORY DEFICITS OF AGED MALE RATS CAN BE IMPROVED BY PYRIMIDINE  
NUCLEOSIDES AND N ACETYLGUTAMINE.  
AU DRAGO F; D'AGATA V; VALERIO C; SPADARO F; RAFFAELE R; NARDO L; GRASSI M;  
FRENI V  
CS INST. PHARMACOL., FAC. MED., VIALE A. DORIA, 6 I-95125 CATANIA, ITALY.  
SO CLIN NEUROPHARMACOL, (1990) 13 (4), 290-296.  
CODEN: CLNEDB. ISSN: 0362-5664.  
FS BA; OLD  
LA English  
AB The pyrimidine nucleosides uridine (URI) and cytidine (CYT), alone or  
associated with n-acetyl-glutamine (NAG), were injected acutely or  
subchronically to aged (26 months old) male rats of the Sprague-Dawley  
strain. Learning and memory abilities of the animals were studied with  
tests of avoidance behavior. The acquisition of active avoidance behavior  
was studied with the shuttle-box test. A step-through type of passive  
avoidance task was used to examine the retention of passive avoidance  
responses. The acquisition of the active avoidance behavior and the  
retention of the passive avoidance response were reduced in aged animals  
as compared with those of young animals. Neither the acute treatment of  
old rats with URI and CYT alone nor that associated with NAG exerted any  
effect on the behavioral tests. In contrast, the subchronic treatment with  
URI and CYT was followed by a facilitation of acquisition of active  
avoidance behavior in the shuttle box and of retention of passive  
avoidance responses in the dark box. A more potent effect on the  
acquisition of the shuttle-box behavior and on the retention of passive  
avoidance reaction was found in animals treated subchronically with the  
pyrimidine nucleosides associated with NAG. These effects may be related  
to the role of pyrimidines in the synthesis of ribonucleic acid, which is  
indispensable for learning and memory processes.  
CC Behavioral Biology - Animal Behavior \*07003  
Behavioral Biology - Conditioning \*07005  
Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062  
Pathology, General and Miscellaneous - Therapy \*12512  
Psychiatry - General; Medical Psychology and Sociology \*21001

**Pharmacology - Clinical Pharmacology 22005**  
**Pharmacology - Neuropharmacology \*22024**  
**Pharmacology - Psychopharmacology \*22026**

BC Muridae 86375  
IT Miscellaneous Descriptors  
URIDINE CYTIDINE CENTRAL STIMULANT-DRUG PASSIVE AVOIDANCE RESPONSE  
LEARNING ANIMAL MODEL

RN **58-96-8** (URIDINE)  
65-46-3 (CYTIDINE)  
289-95-2 (PYRIMIDINE)  
2490-97-3Q, 35305-74-9Q (ACETYLGLUTAMINE)

L80 ANSWER 15 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS  
AN 1989:388595 BIOSIS  
DN BA88:69185  
TI EFFECTS OF **CHRONIC TREATMENT** WITH URIDINE ON STRIATAL  
DOPAMINE RELEASE AND DOPAMINE RELATED BEHAVIORS IN THE ABSENCE OR THE  
PRESENCE OF **CHRONIC TREATMENT** WITH HALOPERIDOL.  
AU AGNATI L F; FUXE K; RUGGERI M; PICH E M; BENFENATI F; VOLTERRA V;  
UNGERSTEDT U; ZINI I  
CS ~~INST. HUM. PHYSIOL., UNIV. MODENA, VIA CAMPI 287, 41100 MODENA, ITALY.~~  
SO NEUROCHEM INT, (1989) 15 (1), 107-114.  
CODEN: NEUIDS. ISSN: 0197-0186.  
FS BA; OLD  
LA English  
AB Uridine (15 mg/kg/day, i.p.), haloperidol (1 ng/kg/day, i.p.), uridine (15  
mg/day, i.p.) plus haloperidol (1 mg/kg/day, i.p.) or saline have been  
chronically administered to Sprague-Dawley male rats. Following 1 week of  
wash-out, the effects of these treatments on basal striatal dopamine (DA)  
release as well as on the DA release induced by an acute haloperidol  
challenge (2 mg/kg, i.p.) were studied by means of intracerebral  
microdialysis. Behavioural tests such as haloperidol-induced catalepsy or  
apomorphine-induced stereotypies were also performed 4-7 days after drug  
withdrawal. The chronic treatment with uridine alone or associated with  
haloperidol markedly reduced DA release induced by an acute haloperidol  
challenge. The behavioural studies also indicated a change in DA-related  
behaviours in these conditions. The animals chronically treated with  
uridine showed significant increases in the stereotypy scores and in the  
catalepsy induced by an acute haloperidol challenge with respect to  
saline treated rats. The present results indicate that a chronic uridine  
treatment is able to potentiate the reduction of the striatal DA  
transmission induced by acute and chronic haloperidol treatment. This  
finding suggests that possibility to reduce the neuroleptic dose in the  
treatment of schizophrenia by combining neuroleptic and uridine  
treatments, thus making it possible to relieve some of the side effects of  
neuroleptic therapy.

CC **Behavioral Biology - Animal Behavior \*07003**  
Biochemical Studies - General 10060  
Biochemical Studies - Proteins, Peptides and Amino Acids 10064  
**Pathology, General and Miscellaneous - Therapy 12512**  
Metabolism - Proteins, Peptides and Amino Acids \*13012  
Endocrine System - Neuroendocrinology \*17020  
**Nervous System - Physiology and Biochemistry \*20504**  
**Nervous System - Pathology \*20506**  
**Psychiatry - Psychopathology; Psychodynamics and Therapy \*21002**  
**Pharmacology - Neuropharmacology \*22024**  
**Pharmacology - Psychopharmacology \*22026**  
Toxicology - Pharmacological Toxicology \*22504  
Laboratory Animals - General 28002

BC Muridae 86375  
IT Miscellaneous Descriptors  
RAT MODEL ANTIPSYCHOTIC AGENT NEUROLEPTIC THERAPY SCHIZOPHRENIA

RN 51-61-6 (DOPAMINE)  
52-86-8 (HALOPERIDOL)  
**58-96-8** (URIDINE)

L80 ANSWER 16 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS  
AN 1989:279680 BIOSIS  
DN BR37:4677  
TI TREATMENT OF PATIENTS PTS WITH CLASSICAL GALACTOSEMIA G WITH **ORAL URIDINE**.  
AU KAUFMAN F R; NG W G; XU Y K; GUIDICI T; KALEITA T A; DONNELL G N  
CS USC SCH. MED., CHILDRENS HOSP. LOS ANGELES, CALIF.  
SO JOINT **MEETING** OF THE AMERICAN PEDIATRIC SOCIETY AND THE SOCIETY  
FOR PEDIATRIC RESEARCH, WASHINGTON, D.C., USA, MAY 1-4, 1989. PEDIATR RES.  
(1989) 25 (4 PART 2), 142A.  
CODEN: PEREBL. ISSN: 0031-3998.  
DT Conference  
FS BR; OLD  
LA English  
CC **General Biology - Symposia, Transactions and Proceedings of  
Conferences, Congresses, Review Annuals 00520**  
**Behavioral Biology - Human Behavior \*07004**  
Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062  
Biochemical Studies - Carbohydrates 10068  
Pathology, General and Miscellaneous - Diagnostic 12504  
**Pathology, General and Miscellaneous - Therapy 12512**  
Metabolism - Carbohydrates \*13004  
Metabolism - Nucleic Acids, Purines and Pyrimidines \*13014  
Metabolism - Metabolic Disorders \*13020  
**Nervous System - Physiology and Biochemistry \*20504**  
**Nervous System - Pathology \*20506**  
**Psychiatry - General; Medical Psychology and Sociology \*21001**  
**Pharmacology - Drug Metabolism; Metabolic Stimulators \*22003**  
**Pharmacology - Clinical Pharmacology \*22005**  
BC Hominidae 86215  
IT Miscellaneous Descriptors  
**ABSTRACT METABOLIC-DRUG PHARMACOKINETICS NEUROPSYCHOLOGY**  
RN **58-96-8 (URIDINE)**

L80 ANSWER 17 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS  
AN 1988:356511 BIOSIS  
DN BA86:51989  
TI EFFECTS OF SHORT-TERM ADMINISTRATION OF CYTIDINE URIDINE AND L GLUTAMINE  
ALONE OR IN COMBINATION ON THE CEREBRAL ELECTRICAL ACTIVITY OF PATIENTS  
WITH **CHRONIC CEREBROVASCULAR DISEASE**.  
AU MANNA V; MARTUCCI N  
CS DEP. NEUROL. NEUROPHYSIOPATHOL., ITALIAN INST. NEUROTRAUMATOL.,  
GROTTAFERRATA, ROME, ITALY  
SQ INT J CLIN PHARMACOL RES, (1988) 8 (3), 199-210.  
CODEN: CPHRDE. ISSN: 0251-1649.  
FS BA; OLD  
LA English  
AB Various data in the literature confirm that spectral analysis by an  
electroencephalograph (EEG) allows the evaluation and quantification of  
the modifications of cerebral electrical activity due to pathological  
events or to drugs acting on the central nervous system. Thirty patients  
with chronic cerebrovascular disease, selected according to the criteria  
established by the 1980 Paris Ad Hoc Committee were submitted to EEG  
analysis in basal conditions and after intravenous short-term  
administration of various doses of cytidine, uridine and levoglutamine  
given either alone or in combination. The combined administration of the  
three substances led to a general improvement of cerebral electrical  
parameters with a trend toward more physiological patterns.  
CC Biochemical Studies - General 10060  
**Pathology, General and Miscellaneous - Therapy 12512**  
Cardiovascular System - Blood Vessel Pathology \*14508  
**Nervous System - Pathology \*20506**  
**Pharmacology - Clinical Pharmacology \*22005**  
**Pharmacology - Cardiovascular System \*22010**  
**Pharmacology - Neuropharmacology \*22024**  
BC Hominidae 86215

IT Miscellaneous Descriptors  
CENTRAL NERVOUS SYSTEM  
RN 56-85-9 (L GLUTAMINE)  
58-96-8 (URIDINE)  
65-46-3 (CYTIDINE)

L80 ANSWER 18 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS  
AN 1988:257899 BIOSIS  
DN BR34:128929  
TI URIDINE AS A POSSIBLE TREATMENT FOR AMYOTROPHIC LATERAL **SCLEROSIS**  
ALS HYPOTHESIS AND PHASE-I STUDY DEMONSTRATING SAFETY.  
AU ENGEL W K  
CS LOS ANGELES, CALIF.  
SO 40TH ANNUAL **MEETING** OF THE AMERICAN ACADEMY OF NEUROLOGY,  
CINCINNATI, OHIO, USA, APRIL 17-23, 1988. **NEUROLOGY** (1988) 38 (3 SUPPL  
1), 326.  
CODEN: NEURAI. ISSN: 0028-3878.  
DT Conference  
FS BR; OLD  
LA English  
CC **General Biology - Symposia, Transactions and Proceedings of**  
**Conferences, Congresses, Review Annuals 00520**  
Genetics and Cytogenetics - Human \*03508  
Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062  
**Pathology, General and Miscellaneous - Therapy 12512**  
Metabolism - Nucleic Acids, Purines and Pyrimidines \*13014  
**Muscle - Pathology \*17506**  
**Nervous System - Pathology \*20506**  
**Pharmacology - Drug Metabolism; Metabolic Stimulators \*22003**  
**Pharmacology - Clinical Pharmacology \*22005**  
**Pharmacology - Neuropharmacology \*22024**  
BC Hominidae 86215  
IT Miscellaneous Descriptors  
**ABSTRACT HUMAN METABOLIC-DRUG DNA RNA SPINAL MUSCULAR ATROPHY**  
RN 58-96-8 (URIDINE)

L80 ANSWER 19 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS  
AN 1987:48021 BIOSIS  
DN BA83:27367  
TI EFFECTS OF LARGE DOSES OF PYRIMIDINE NUCLEOSIDES CYTIDINE AND URIDINE IN  
ELDERLY PATIENTS WITH **NEUROPSYCHOLOGICAL** DISTURBANCES CAUSED BY  
VASCULAR AND CEREBRAL METABOLIC INSUFFICIENCY.  
AU MERLINI G; BREDA D; VALVERI G; ZILLOTTO G  
CS VIA VENDRAMINI, 7-35100 PADOVA.  
SO **GAZZ MED ITAL ARCH SCI MED, (1986) 145 (6), 379-390.**  
CODEN: GMIMES.  
FS BA; OLD  
LA Italian  
AB The effects of large doses of endovenous and intramuscular nucleosides  
(Cytidine and Uridine) were studied in a double blind test against a  
placebo conducted on a group of elderly patients hospitalized with  
substantial mental deterioration related to aging. Analysis of the results  
of the psychometric tests employed showed a statistically significant  
improvement among the treated patients in relation to memorisation  
process, attention, concentration capacity, temporospatial orientation and  
constructive praxis as well as diminishing depression, anxiety and related  
disturbances. The result was an improvement in individual performances,  
easier interpersonal communication and an improved quality of life. The  
drugs were always very well tolerated.  
CC Biochemical Studies - General 10060  
Cardiovascular System - Blood Vessel Pathology \*14508  
**Nervous System - Pathology \*20506**  
**Psychiatry - Psychophysiology \*21003**  
**Pharmacology - Neuropharmacology \*22024**  
**Pharmacology - Psychopharmacology \*22026**  
Gerontology \*24500

BC Hominidae 86215  
IT Miscellaneous Descriptors  
AGING PHARMACODYNAMICS  
RN 58-96-8 (URIDINE)  
65-46-3 (CYTIDINE)  
289-95-2 (PYRIMIDINE)

L80 ANSWER 20 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS

AN 1986:154646 BIOSIS

DN BA81:65062

TI **SLEEP**-PROMOTING EFFECTS OF INTRAPERITONEALLY ADMINISTERED  
URIDINE IN UNRESTRAINED RATS.

AU HONDA K; OKANO Y; KOMODA Y; INOUE S

CS INST. MED. DENTAL ENG., TOKYO MED. DENTAL UNIV., KANDA-SURUGADAI 2-3-10,  
CHIYODA-KU, TOKYO 101.

SO NEUROSCI LETT, (1985) 62 (1), 137-142.

CODEN: NELED5. ISSN: 0304-3940.

FS BA; OLD

LA English

AB An intraperitoneal injection of 0.1 nmol uridine in rats resulted in a transient excess slow-wave sleep if administered shortly before onset of the dark period. The sleep latency was remarkably shortened. A small dose (0.01 nmol) and larger doses (1, 10, 100 nmol) caused no effect. Uridine at a dose of 0.1 nmol was entirely ineffective if injected shortly before onset of the light period, while it resulted in transient excess paradoxical sleep if injected at an early phase of the light period. It is concluded that uridine, if timely administered through a systemic route, may pass the blood-brain barrier to modulate sleep in rats.

CC **Behavioral Biology - Animal Behavior \*07003**

Circadian Rhythms and Other Periodic Cycles \*07200

Biochemical Studies - Proteins, Peptides and Amino Acids 10064

Biophysics - Membrane Phenomena \*10508

Blood, Blood-Forming Organs and Body Fluids - Blood and Lymph Studies  
\*15002

**Nervous System - Physiology and Biochemistry \*20504**

**Psychiatry - Psychophysiology \*21003**

**Pharmacology - Neuropharmacology \*22024**

Routes of Immunization, Infection and Therapy 22100

BC Muridae 86375

IT Miscellaneous Descriptors

BLOOD-BRAIN BARRIER LIGHT PERIOD DARK PERIOD

RN 58-96-8 (URIDINE)

L80 ANSWER 21 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS

AN 1986:107694 BIOSIS

DN BA81:18110

TI A COMPARISON OF THE DOSE RESPONSE EFFECTS OF PYRIMIDINE RIBONUCLEOSIDES  
AND ADENOSINE ON **SLEEP** IN RATS.

AU RADULOVACKI M; VIRUS R M; RAPOZA D; CRANE R A

CS DEPARTMENT PHARMACOLOGY, COLLEGE MEDICINE, UNIVERSITY ILLINOIS CHICAGO,  
835 W WOLCOTT AVENUE, CHICAGO, ILL. 60612, USA.

SO PSYCHOPHARMACOLOGY, (1985) 87 (2), 136-140.

CODEN: PSCHDL. ISSN: 0033-3158.

FS BA; OLD

LA English

AB The dose-response effects of intracerebroventricular (ICV) infusion of the pyrimidine ribonucleosides cytidine and uridine and the purine ribonucleoside adenosine on sleep and wakefulness (W) in rats were examined and compared. All three drugs were administered at doses of 1, 10, and 100 nmol in volumes of 5 .mu.l, with control animals receiving equivolumetric infusions of 0.9% saline. Treatment with 1 nmol cytidine significantly increased W and decreased both deep slow wave sleep (S2) and total sleep (TS) during both the 3-6 and 0-6 h recording periods. In addition, this dose of cytidine significantly increased light slow wave sleep (S1) during the first 3 h of recording. The 10 nmol dose of cytidine increased W and decreased TS during the 0-6 h recording. ICV



administration of uridine produced no significant changes in sleep and W at any dose during any of the recording periods examined. In contrast, adenosine exhibited significant hypnotic effects at all doses examined. All three doses of adenosine significantly reduced W and increased TS during both the 0-3 and 0-6 h recording periods. The 1 and 100 nmol doses of adenosine also significantly increased S2 during both the 0-3 and 0-6 h periods. In addition, the 100 nmol dose of adenosine significantly decreased W and increased both S2 and TS during the second 3 h of recording. Both the 1 and 100 nmol doses of adenosine also significantly reduced the latencies to the onset of rapid eye movement (REM) sleep. These data demonstrate the pyrimidine ribonucleosides do not produce hypnotic effects similar to those of adenosine and, in the case of cytidine, can actually suppress sleep. In addition, adenosine has been shown to significantly increase TS, primarily through an enhancement of S2, and decrease W at a dose as low as 1 nmol. The implications of these results with respect to the role of ribonucleosides, particularly adenosine, in the processes of sleep and W are discussed.

CC **Behavioral Biology - Animal Behavior 07003**

Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062

**Nervous System - Physiology and Biochemistry \*20504**

**Psychiatry - Psychophysiology \*21003**

**Pharmacology - Clinical Pharmacology 22005**

**Pharmacology - Neuropharmacology \*22024**

**Pharmacology - Psychopharmacology \*22026**

BC Muridae 86375

IT Miscellaneous Descriptors

URIDINE CYTIDINE HYPNOTIC

RN 58-61-7 (ADENOSINE)

58-96-8 (URIDINE)

65-46-3 (CYTIDINE)

289-95-2 (PYRIMIDINE)

L80 ANSWER 22 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS

AN 1985:364533 BIOSIS

DN BA80:34525

TI **PROTECTIVE EFFECT OF URIDINE ON D GALACTOSAMINE-INDUCED DEFICIENCY IN BRAIN URIDINE PHOSPHATES.**

AU POPOV N; SCHMIDT S; MATTHIES H

CS INST. FUER PHARMAKOL. TOXIKOL. DER MED. AKAD. MAGDEBURG, 3090 MAGDEBURG, DDR.

SO BIOMED BIOCHIM ACTA, (1984 (RECD 1985)) 43 (12), 1399-1404.

CODEN: BBIADT.

FS BA; OLD

LA English

AB In the rat, 2 h after intraventricular application of 10 .mu.mole D-galactosamine as well as 10 and 20 .mu.mol uridine, opposite effects on brain content of UDP-glucose and uracil nucleotides were observed. While D-galactosamine caused a strong decrease in content of uridine phosphates, the brain content of the latter substances was markedly increased after uridine application. Furthermore, 20 .mu.mol uridine applied 10 min prior to D-galactosamine administration prevented the D-galactosamine-induced drop in brain uridine phosphates. The results are discussed in the light of behavioral findings in which D-galactosamine-induced impairment of retention performance of an acquired behavior could be abolished by uridine pretreatment.

CC **Behavioral Biology - Animal Behavior \*07003**

Biochemical Studies - General 10060

Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062

Biochemical Studies - Proteins, Peptides and Amino Acids 10064

Biochemical Studies - Carbohydrates 10068

Enzymes - Physiological Studies \*10808

Metabolism - Carbohydrates \*13004

Metabolism - Proteins, Peptides and Amino Acids \*13012

Metabolism - Nucleic Acids, Purines and Pyrimidines \*13014

**Nervous System - General; Methods 20501**

**Nervous System - Pathology \*20506**

**Psychiatry - Psychopathology; Psychodynamics and Therapy \*21002**  
**Pharmacology - Neuropharmacology \*22024**  
**Pharmacology - Psychopharmacology \*22026**  
Routes of Immunization, Infection and Therapy 22100  
Toxicology - General; Methods and Experimental 22501

BC Muridae 86375  
IT Miscellaneous Descriptors  
RAT RETENTION UDP GLUCOSE URACIL

RN 50-99-7 (GLUCOSE)  
**58-96-8** (URIDINE)  
58-98-0 (UDP)  
66-22-8 (URACIL)  
7535-00-4 (D GALACTOSAMINE)

L80 ANSWER 23 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS  
AN 1985:244403 BIOSIS  
DN BA79:24399  
TI LITTLE **SLEEP**-PROMOTING EFFECT OF 3 **SLEEP** SUBSTANCES  
DIURNALLY INFUSED IN UNRESTRAINED RATS.

AU INOUE S; HONDA K; KOMODA Y; UCHIZONO K; UENO R; HAYAISHI O  
CS INSTITUTE FOR MEDICAL AND DENTAL ENGINEERING, TOKYO MEDICAL AND DENTAL  
UNIVERSITY, KANDA-SURUGADAI 2-3-10, CHIYODA-KU, TOKYO 101.

SO NEUROSCI LETT (1984) 49 (1-2), 207-212.  
~~CODEN: NELEDS. ISSN: 0304-3940.~~

FS BA; OLD  
LA English  
AB Delta-sleep-inducing peptide (2.5 nmol), prostaglandin D2 (0.36 nmol) and  
uridine (10 pmol) were infused i.v. for 10 h at daytime in otherwise  
saline-infused freely moving male rats. In contrast to a nocturnal  
infusion which may result in marked sleep-promoting effects, such a  
diurnal infusion brought about almost no change in sleep parameters. The  
requirement of sleep in rats might be fully achieved at the environmental  
light period to cancel the effect of the exogenously administered sleep  
substances. An endogenous sleep substance should be characterized by a  
property not to cause excessive sleep at the time when sleep is  
physiologically saturated.

CC **Behavioral Biology - Animal Behavior \*07003**  
Circadian Rhythms and Other Periodic Cycles \*07200  
Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062  
Biochemical Studies - Proteins, Peptides and Amino Acids 10064  
Biochemical Studies - Lipids 10066  
External Effects - Light and Darkness 10604  
Endocrine System - General \*17002  
**Nervous System - Physiology and Biochemistry \*20504**  
**Psychiatry - Psychophysiology \*21003**  
**Pharmacology - Neuropharmacology \*22024**  
**Pharmacology - Psychopharmacology \*22026**  
Routes of Immunization, Infection and Therapy 22100

BC Muridae 86375  
IT Miscellaneous Descriptors  
DELTA-SLEEP-INDUCING PEPTIDE PROSTAGLANDIN D-2 URIDINE NOCTURNAL EFFECT

RN **58-96-8** (URIDINE)  
41598-07-6 (PROSTAGLANDIN D-2)  
69431-45-4 (DELTA-SLEEP-INDUCING PEPTIDE)

L80 ANSWER 24 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS  
AN 1980:150296 BIOSIS  
DN BA69:25292  
TI INFLUENCE OF SOME BIOLOGICAL PYRIMIDINES ON THE SUCCINATE CYCLE DURING AND  
AFTER CEREBRAL **ISCHEMIA** IN RATS.

AU BENZI G; ARRIGONI E; MARZATICO F; VILLA R F  
CS INST. PHARMACOL., DEP. SCI., UNIV. PAVIA, PAVIA, ITALY.  
SO BIOCHEM PHARMACOL, (1979) 28 (17), 2545-2550.  
CODEN: BCPCA6. ISSN: 0006-2952.

FS BA; OLD  
LA English

AB Some cortical metabolites (glycogen, glucose, G-6-P, pyruvate, lactate, .alpha.-ketoglutarate, succinate, fumarate, malate, citrate, glutamate, glutamine, alanine, NH4+) were studied in rat brain after 5 min of complete compression ischemia, and after 15 min of recirculation following 5 min of ischemia. The 2 conditions (ischemia and post ischemic restitution) were induced in control animals and in rats pretreated 1 h before by an i.p. injection of 120 mg/kg of some biological pyrimidines (uridine, cytidine and uridine diphosphate glucose [UDPG]). At the cerebral level total complete ischemia induced the: drop of substrates and of glycolytic intermediates, consistent with the increase of lactate and redox state; increase of succinate and alanine, decrease of malate and fumarate and depletion of .alpha.-ketoglutarate. Some of the events may be regarded as the expression of the activation of the succinate cycle which contributed by .apprx. 10% to the release of anaerobic energy during cerebral ischemia. Pretreatment with the tested pyrimidines did not modify this cerebral biochemical pattern. During post-ischemic recovery, cerebral parameters tended to normalize, except for a further increase in alanine production (as an expression of the activation of the alanine aminotransferase reaction) with conversion of pyruvate into .alpha.-ketoglutarate available for the ammonia-detoxicating processes (amination to glutamate and amidation to glutamine). During post-ischemic recovery, pretreatment with cytidine was poorly active. Pretreatment with uridine decreased glucose, G-6-P and pyruvate cerebral concentrations, while succinate and alanine were increased. This latter effect was present in the case of pretreatment with UDPG. UDPG increased the cerebral concentration of glycogen and decreased those of fumarate and malate. The different biochemical actions of uracyl derivatives are discussed with regard to their biological effects.

CC Biochemical Studies - General 10060  
 Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062  
 Biochemical Studies - Proteins, Peptides and Amino Acids 10064  
 Biochemical Studies - Carbohydrates 10068  
 Biophysics - General Biophysical Techniques 10504  
 Biophysics - Molecular Properties and Macromolecules \*10506  
 Biophysics - Bioenergetics: Electron Transport and Oxidative Phosphorylation 10510  
 Enzymes - Chemical and Physical 10806  
 Enzymes - Physiological Studies \*10808  
 Anatomy and Histology, General and Comparative - Experimental Anatomy 11104  
 Chordate Body Regions - Abdomen 11314  
**Movement 12100**  
**Pathology, General and Miscellaneous - Therapy 12512**  
 Metabolism - General Metabolism; Metabolic Pathways \*13002  
 Metabolism - Energy and Respiratory Metabolism \*13003  
 Metabolism - Carbohydrates \*13004  
 Metabolism - Proteins, Peptides and Amino Acids \*13012  
 Metabolism - Nucleic Acids, Purines and Pyrimidines \*13014  
 Cardiovascular System - General; Methods 14501  
 Cardiovascular System - Physiology and Biochemistry 14504  
 Cardiovascular System - Blood Vessel Pathology \*14508  
 Blood, Blood-Forming Organs and Body Fluids - Blood and Lymph Studies 15002  
**Nervous System - General; Methods 20501**  
**Nervous System - Pathology \*20506**  
**Pharmacology - Drug Metabolism; Metabolic Stimulators \*22003**  
**Pharmacology - Cardiovascular System \*22010**  
**Pharmacology - Neuropharmacology \*22024**  
 Routes of Immunization, Infection and Therapy 22100  
 Toxicology - General; Methods and Experimental \*22501

BC Muridae 86375

IT Miscellaneous Descriptors

CORTEX URIDINE CYTIDINE URIDINE DI PHOSPHATE GLUCOSE  
 CARDIOVASCULAR-DRUG GLYCOGEN GLUCOSE GLUCOSE 6 PHOSPHATE PYRUVATE  
 LACTATE ALPHA KETO GLUTARATE SUCCINATE FUMARATE MALATE GLUTAMINE  
 ALANINE AMMONIUM ION ALANINE AMINO TRANSFERASE REDOX STATE AMMONIA DE

## TOXICATION PHARMACO KINETICS

- RN 50-99-7 (GLUCOSE)  
56-14-4 (SUCCINATE)  
56-73-5 (GLUCOSE 6 PHOSPHATE)  
57-60-3 (PYRUVATE)  
**58-96-8** (URIDINE)  
65-46-3 (CYTIDINE)  
113-21-3 (LACTATE)  
133-89-1 (URIDINE DI PHOSPHATE GLUCOSE)  
142-42-7 (FUMARATE)  
149-61-1 (MALATE)  
289-95-2D (PYRIMIDINES)  
328-50-7 (ALPHA KETO GLUTARATE)  
9000-86-6 (ALANINE AMINO TRANSFERASE)  
9005-79-2 (GLYCOGEN)  
14798-03-9 (AMMONIUM ION)  
56-41-7Q, 6898-94-8Q (ALANINE)  
56-85-9Q, 6899-04-3Q (GLUTAMINE)
- L80 ANSWER 25 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS  
AN 1975:116850 BIOSIS  
DN BA59:16850  
TI RNA TREATMENT OF **DEMENTIA** A DOUBLE-BLIND STUDY.  
AU MUNCH-PETERSEN S; PAKKENBERG H; KORNERUP H; ORTMANN J; IPSEN E; JACOBSEN P; SIMMELSGARD H  
SO ACTA NEUROL SCAND, (1974) 50 (5), 553-572.  
CODEN: ANRSAS. ISSN: 0001-6314.  
FS BA; OLD  
LA Unavailable  
CC Methods, Materials and Apparatus, General - Photography 01012  
Cytology and Cytochemistry - Animal 02506  
Radiation - Radiation and Isotope Techniques 06504  
**Behavioral Biology - Animal Behavior 07003**  
**Behavioral Biology - Human Behavior 07004**  
Biochemistry - Gases 10012  
Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062  
Biochemical Studies - Proteins, Peptides and Amino Acids 10064  
Biochemical Studies - Sterols and Steroids 10067  
Biophysics - General Biophysical Techniques 10504  
Anatomy and Histology, General and Comparative - Radiologic Anatomy 11106  
**Pathology, General and Miscellaneous - Therapy \*12512**  
Metabolism - Sterols and Steroids \*13008  
Metabolism - Proteins, Peptides and Amino Acids \*13012  
Metabolism - Porphyrins and Bile Pigments \*13013  
Blood, Blood-Forming Organs and Body Fluids - Blood and Lymph Studies \*15002  
Dental and Oral Biology - General; Methods 19001  
**Nervous System - General; Methods 20501**  
**Nervous System - Physiology and Biochemistry \*20504**  
**Nervous System - Pathology \*20506**  
**Psychiatry - General; Medical Psychology and Sociology 21001**  
**Psychiatry - Psychopathology; Psychodynamics and Therapy \*21002**  
**Pharmacology - Drug Metabolism; Metabolic Stimulators \*22003**  
**Pharmacology - Clinical Pharmacology 22005**  
Routes of Immunization, Infection and Therapy 22100  
Plant Physiology, Biochemistry and Biophysics - Chemical Constituents 51522  
BC Fungi - Unspecified 15000  
Hominidae 86215  
Muridae 86375  
IT Miscellaneous Descriptors  
MOUSE HUMAN URIDINE UPTAKE  
RN **58-96-8** (URIDINE)  
**58-96-8** (URIDINE)
- L80 ANSWER 26 OF 26 BIOSIS COPYRIGHT 2000 BIOSIS

AN 1971:174828 BIOSIS  
 DN BA52:84828  
 TI THE EFFECTS OF DRUGS ON **LEARNING** IN A SIMPLE PREPARATION.  
 AU KERKUT G A; OLIVER G W O; RICK J T; WALKER R J  
 SO COMP GEN PHARMACOL, (1970) 1 (4), 437-483.  
 CODEN: CPGPAY. ISSN: 0010-4035.  
 FS BA; OLD  
 LA Unavailable  
 CC Radiation - Radiation and Isotope Techniques 06504  
**Behavioral Biology - Conditioning \*07005**  
 Biochemical Studies - General 10060  
 Biochemical Studies - Nucleic Acids, Purines and Pyrimidines 10062  
 Biochemical Studies - Proteins, Peptides and Amino Acids 10064  
 Biophysics - General Biophysical Techniques 10504  
 Enzymes - Physiological Studies \*10808  
**Movement 12100**  
 Metabolism - Proteins, Peptides and Amino Acids \*13012  
 Metabolism - Nucleic Acids, Purines and Pyrimidines \*13014  
**Nervous System - Physiology and Biochemistry \*20504**  
**Pharmacology - Drug Metabolism; Metabolic Stimulators \*22003**  
**Pharmacology - Neuropharmacology \*22024**  
**Pharmacology - Psychopharmacology 22026**  
 Invertebrata, Comparative and Experimental Morphology, Physiology and  
 Pathology - Insecta - Physiology \*64076  
 Invertebrate Body Regions and Structures - Appendages 64212  
 BC Orthoptera 75340  
 IT Miscellaneous Descriptors  
 COCKROACH METAB-DRUGS RNA PROTEIN SYNTHESIS METATHORACIC GANGLION  
 URIDINE LEUCINE INCORPORATION RADIOACTIVE LABEL CHOLIN ESTERASE  
 RN **58-96-8** (URIDINE)  
 9001-08-5 (CHOLIN ESTERASE)  
 61-90-5Q, 7005-03-0Q (LEUCINE)

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(FILE 'BIOSIS' ENTERED AT 08:52:37 ON 08 AUG 2000)

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L81 931 S URIDINE  
 E URIDINE/DCN  
 E E3+ALL/DCN  
 L82 129 S E2 OR 0177/DRN

L83 976 S L81,L82  
 L84 55 SEA L83 AND (P440 OR P444 OR P445 OR P446 OR P447 OR P448 OR  
 P450 OR P451 OR P517 OR P528 OR P520)/M0,M1,M2,M3,M4,M5,M6  
 L85 15 S L83 AND (B14-J? OR C14-J?)/MC  
 L86 54 S L83 AND (B12-C? OR C12-C?)/MC  
 L87 25 S L83 AND (B12-D? OR C12-D?)/MC  
 L88 22 S L83 AND (B12-E? OR C12-E?)/MC  
 L89 0 S L83 AND (B12-F07? OR C12-F07?)/MC  
 L90 23 S L83 AND (B14-N16 OR C14-N16 OR B12-C10 OR C12-C10)/MC  
 L91 110 S L84-L90  
 L92 63 S L91 AND URID?/TI  
 L93 47 S L91 NOT L92  
 L94 11 S L92 AND (PSYCHO? OR STRESS OR PARKINSON? OR MEMORY OR DEGENER  
 E WATKINS C/AU  
 L95 66 S E3-E14  
 E WURTMAN R/AU  
 L96 53 S E3,E4  
 L97 1 S L95,L96 AND L83  
 L98 11 S L94,L97

FILE 'WPIDS' ENTERED AT 09:57:12 ON 08 AUG 2000

=> d all abeq tech tot

L98 ANSWER 1 OF 11 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD  
 AN 2000-195185 [17] WPIDS  
 DNC C2000-060486  
 TI Treatment of cytidine-dependent neurological disorders e.g. **memory**  
 disorders, cognitive dysfunction, emotional disorders, ataxia, tardive  
 dyskinesia and cerebral thrombosis by administration of **uridine**  
 or a **uridine** source.  
 DC B03  
 IN **WATKINS, C; WURTMAN, R J**  
 PA (MASI) MASSACHUSETTS INST TECHNOLOGY  
 CYC 20  
 PI WO 2000006174 A1 20000210 (200017)\* EN 22p A61K031-55  
 RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
 W: CA JP  
 ADT WO 2000006174 A1 WO 1999-US17235 19990730  
 PRAI US 1998-95002 19980731  
 IC ICM A61K031-55  
 ICS A61K031-235; A61K031-515; A61K031-685; A61K031-70  
 AB WO 200006174 A UPAB: 20000405  
 NOVELTY - A new method of treating neurological disorders comprises  
 administration of **uridine** or a **uridine** source.  
 DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a method  
 for treating neurological disorders comprising administration of at least  
**uridine** or a **uridine** source and other compounds.  
 ACTIVITY - Neuroprotective; nootropic; anticonvulsant; tranquilizer;  
 antidepressant; thrombolytic; vasotropic. Gerbils were given orally  
**uridine** (250 mg/kg orally) and 60 minutes later plasma and brain  
 levels of cytidine and **uridine** were measured by HPLC method.  
 Plasma levels of **uridine** were raised by 100 % and cytidine by  
 13.9% while brain levels of **uridine** were raised by 100 % and  
 cytidine levels by 39%. Results indicated that **uridine**, when  
 transported to the brain, was readily converted to cytidine (conversion  
 more efficient in the brain than in the plasma). Similar experiments were  
 conducted in humans showed similar results (by measuring the CSF levels).  
 MECHANISM OF ACTION - Increases systemic and brain cytidine levels.  
 USE - The method is useful for treating neurological disorders,  
 especially memory disorders (including memory decline associated with  
 brain aging, e.g. Pick's disease, Lewy Body disease, Huntington's disease  
 and AIDS dementia), cognitive dysfunction (including lack of attention,  
 alertness, concentration, focus or dyslexia), emotional disorders  
 (including mania, depression, stress, panic, anxiety, dysthymia,

psychosis, seasonal affective disorder and bipolar disorder), ataxia, Friedreich's ataxia, tardive dyskinesia, cerebral thrombosis, ischemia, cerebrovascular diseases resulting from hypoxia, behavioral and neurological syndromes (including after brain trauma, spinal cord injury and anoxia) and peripheral nervous system disorders (including myasthenia gravis, post polio syndrome and muscular dystrophy).

ADVANTAGE - Administration of **uridine** elevates levels of cytidine in the brain and is transported across the blood-brain barrier much more efficiently.

Dwg.0/4

FS CPI

FA AB; DCN

MC CPI: B04-B01B; B04-B03A; B05-B01P; B07-D12; B07-D13; B10-A22; B10-B02H;

B10-C04E; B14-F01E; B14-F02C; B14-F02D; B14-F04; **B14-J01;**

**B14-J01A1; B14-J01A4; B14-J02;**

**B14-J07; B14-N16**

TECH UPTX: 20000405

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Drugs: The other compound is preferably choline (especially choline chloride, choline bitartrate and choline stearate), a choline precursor (especially sphingomyelin, cytidine-diphospho-choline, citicoline or CDP-choline, an acylglycerophosphocholine, lecithin, lysolecithin, glycerophosphatidylcholine or fatty acids), **uridine** phosphorylase inhibitors (e.g. benzyl barbiturate), **uridine** secretion inhibitors (dilazep or hexobendine), **uridine** renal transport competitors (L-**uridine**, L-2',3'-dideoxyuridine and D-2',3'-dideoxyuridine).

L98 ANSWER 2 OF 11 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1998-032325 [03] WPIDS

DNC C1998-010921

TI Composition comprising **uridine** and neurotrophins - useful in treatment of disturbances of nervous system due to **degeneration** of neuronal or glial cells.

DC B03 B04

IN MATERAZZI, M; PIAZZA, C; POLITI, V

PA (POLI-N) POLIFARMA SPA

CYC 77

PI WO 9745127 A1 19971204 (199803)\* EN 27p A61K031-70

RW: AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG

W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN YU

AU 9730468 A 19980105 (199821) A61K031-70

EP 914131 A1 19990512 (199923) EN A61K031-70

R: AT CH DE DK ES FI FR GB IT LI NL PT SE

US 5962459 A 19991005 (199948)# A61K031-55

BR 9709379 A 20000111 (200020) A61K031-70

JP 2000503668 W 20000328 (200026) 22p A61K031-70

HU 2000000124 A2 20000528 (200035) A61K031-70

ADT WO 9745127 A1 WO 1997-IT117 (19970523) AU 9730468 A AU 1997-30468 19970523; EP 914131 A1 EP 1997-925266 19970523, WO 1997-IT117 19970523; US 5962459 A Provisional US 1996-18543 19960529, US 1997-862306 19970523; BR 9709379 A BR 1997-9379 19970523, WO 1997-IT117 19970523; JP 2000503668 W JP 1997-541970 19970523, WO 1997-IT117 19970523; HU 2000000124 A2 WO 1997-IT117 19970523, HU 2000-124 19970523

FDT AU 9730468 A Based on WO 9745127; EP 914131 A1 Based on WO 9745127; BR 9709379 A Based on WO 9745127; JP 2000503668 W Based on WO 9745127; HU 2000000124 A2 Based on WO 9745127

PRAI IT 1996-RM364 19960528; US 1997-862306 19970523

IC ICM A61K031-55; A61K031-70

ICS A61P025-00; A61P025-16; A61P025-28; A61P031-00; A61P035-00

AB WO 9745127 A UPAB: 19980119

Composition (I), for the treatment of disturbances of the nervous system due to selective degeneration of neuronal or glial cells, comprises

*Report?*

**uridine** and neurotrophins. The ratio of **uridine** :neurotrophins is 1:10 to 1:100. Also claimed is the use of **uridine** as a substance for mimicking neurotrophins in a treatment as above.

USE - (I) are used in the treatment of disturbances of the nervous system, and also for promoting differentiation and functioning and maturation of cells. It may be used in treatment of nervous system disturbances due to degeneration of neuronal/glial cells, such as peripheral neuropathies of iatrogenic origin (e.g. as a consequence of administration of anti-viral drugs, especially those used in the treatment of AIDS, or anti-tumour drugs), Alzheimer's disease, Parkinson's disease, stroke, lateral amyotrophic sclerosis (all claimed).

Dwg.0/0

FS CPI  
FA AB; GI; DCN  
MC CPI: B04-B03A; B04-H06; **B14-J01**

L98 ANSWER 3 OF 11 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD  
AN 1995-317412 [41] WPIDS  
DNC C1995-140870

TI Drug compsn. for enhancing resistance to **psychological stress** - comprises nucleic acid mixt. of inosine, cytidine, **uridine**, guanosine-5'-phosphate or its salt, and thymidine..

DC B02 B03

PA (SAKA) OTSUKA SEIYAKU KOGYO KK

CYC 1

PI JP 07215879 A 19950815 (199541)\* 4p A61K031-70

ADT JP 07215879 A JP 1994-10774 19940202

PRAI JP 1994-10774 19940202

IC ICM A61K031-70

AB JP 07215879 A UPAB: 19951019

Drug compsn. comprises a mixt. of inosine, cytidine, **uridine**, guanosine-5'-phosphate or its salt, and thymidine as active ingredients.

The molar ratio of the five components is pref. inosine/ cytidine/ **uridine**/ guanosine-5'-phosphate or its salt/ thymidine = 4:4:3:4:1. Na or K salt, pref. disodium salt.

For intravenous admin., an injection contg. the mixt. at concn. of 2 - 8 % (w/v) is suitable. For oral admin. the daily dose is pref. 1.5 - 2.5 g/patient.

USE/ADVANTAGE - The compsn. is useful for the prevention and/or treatment of various syndromes induced by excessive psychological stress, e.g. digestive ulcer. It has less serious side effects (i.e. a hepatic coma) than tyrosine, a drug known for its anti-stress activity.

A gp. of male S-D rats was fed with 20% casein contg. a 4:4:3:4:1 (in mole) mixt. of inosine, cytidine, **uridine**, guanosine-5'-phosphate disodium salt, and thymidine at 0.5 % (w/w) for 14 days. After starvation for 24 hours they were deprived of body movement by restriction and sunk in water except their heads for three hours to induce stress ulcer. Immediately afterwards their stomachs were extracted and the ratio of the ulcer area to the total area of the gastric mucous membrane was measured as a stress indicator. The rats fed with a diet contg. the drug showed the ratio of 1.73 %, significantly lower than the ratio (7.08 %) for rats fed only 20% casein.

Dwg.0/0

FS CPI  
FA AB; DCN  
MC CPI: B04-B03A; B04-B03B; B14-E08

L98 ANSWER 4 OF 11 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD  
AN 1994-089979 [11] WPIDS  
DNC C1994-041613

TI Use of **uridine** as **antidepressant** - shows its reduced toxicity and elimination of several harmful side effects.

DC B03

IN KARKISHCHENKO, N N; MAKLYAKOV, YU S; STRADOMSKII, B V

PA (ROME) ROST MED INST



CYC 1  
 PI RU 2003332 C1 19931130 (199411)\* 4p A61K031-505  
 ADT RU 2003332 C1 SU 1989-4702930 19890609  
 PRAI SU 1989-4702930 19890609  
 IC ICM A61K031-505  
 AB RU 2003332 C UPAB: 19940428  
 Novel use of **uridine** (I) as an antidepressant. (I) is an N-glycoside of uracil in which the first C atom of ribose is joined, through the glycoside bond, to N-1 of uracil. It is an endogenic cpd. which appears in nucleic acids and in some ferments.  
 USE/ADVANTAGE - In treatment of depression. Increased activity, fewer side effects, reduced toxicity.  
 FS CPI  
 FA AB; DCN  
 MC CPI: B04-B03A; **B14-J01A1**

L98 ANSWER 5 OF 11 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD  
 AN 1993-128387 [16] WPIDS  
 DNC C1993-056960  
 TI New **uridine** deriv. **CNS** inhibitors - are hypnotics, **anxiolytics** and anti-epileptics etc. obtd. by reacting N-unsubstituted **uridine**(s) with phenacyl halide derivs. in presence of base.  
 DC B03  
 PA (NISR) NISSUI PHARM CO LTD  
 CYC 1  
 PI JP 05059087 A 19930309 (199316)\* 7p C07H019-06  
 JP 3032053 B2 20000410 (200023) 8p C07D405-04  
 ADT JP 05059087 A JP 1991-227230 19910906; JP 3032053 B2 JP 1991-227230 19910906  
 FDT JP 3032053 B2 Previous Publ. JP 05059087  
 PRAI JP 1991-227230 19910906  
 IC ICM C07D405-04; C07H019-06  
 ICS A61K031-506; A61K031-70; A61K031-7072; A61P025-00; A61P025-20; A61P025-22  
 AB JP 05059087 A UPAB: 19930924

**Uridine** derivs. of formula (1) are new, where R' = H, halogen atom or lower alkyl, R2 and R3 = H, OH or lower alkoxy, R4 = H or lower alkyl.

(1) may be prepd. by reacting N-unsubstd. **uridine** derivs. of formula (2) (e.g. **uridine**, deoxyuridine, 2',3',5'-tri-O-methyluridine, 2',3',5'-tri-O-ethyluridine, 2',3',5'-tri-O-propyluridine, 3',5'-di-O-methyldeoxyuridine, 3',5'-di-O-ethyldeoxyuridine, 3',5'-di-O-propyldeoxyuridine with a phenacyl halide of formula (3) (where X = halogen atom) (e.g. phenacyl bromide, p-bromophenacyl bromide, p-methylphenacyl bromide) in presence of a base, e.g. K2CO3, Na2CO3 in an inert solvent, e.g. DMF, acetone at a temp. of 5-150 deg.C for 1 to 50 hrs.

USE/ADVANTAGE - (1) exhibit potent hypnotic action and action prolonging pentobarbital sleep with low toxicity and are useful as central inhibitors e.g. psychopharmaceuticals, anti-anxiety drugs, anti-epileptics, muscular relaxants. (1) may be administered orally as powder, tablets, capsules or granules at a dose of 5-20 mg/60 kg. Also applicable parenterally as injection (i.v. into ventriculus lateralis).

In an example, to a soln. of 4.8841 g. (20 mmol.) **uridine** and 4.7 g. (34 mmol.) K2CO3 in 16 ml. DMF and 16 ml. acetone was added 4.65 g. (30 mmol.) phenacyl chloride and the mixt. refluxed at 90 deg.C for 5 hrs. and then evapd. in vacuo. The residue was chromatographed on a silica gel column (200 g.) and eluted with CHCl3/EtOAc/MeOH (5:4:1) to give light yellow crystals, which were recrystallised from EtOH/hexane (1:2) to give 3.7962 g. (52.4% yield) of N3-phenacryluridine as light yellow needles. IR (KBr) Fig.1.

O/O

FS CPI  
 FA AB; GI; DCN  
 MC CPI: B04-B03A; **B12-C07; B12-C10; B12-D04;**

## B12-E02

L98 ANSWER 6 OF 11 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD  
 AN 1990-001674 [01] WPIDS  
 DNC C1990-000740  
 TI Using **uridine** to control function of dopaminergic system - esp.  
 for treating **schizophrenia** and **Parkinson's** disease.  
 DC B03  
 IN DELUCA, G F; DISTAZIO, G; MATERAZZI, M; POLITI, V; DE, LUCA G; DI, STAZIO  
 G  
 PA (POLI-N) POLIFARMA SPA; (PLIF-N) PLIFARMA SPA  
 CYC 15  
 PI EP 348360 A 19891227 (199001)\* EN 5p  
 R: AT BE CH DE ES FR GB LI NL SE  
 JP 02045425 A 19900215 (199013)  
US 4960759 A 19901002 (199042)  
 IT 1219667 B 19900524 (199213)  
 EP 348360 B1 19940119 (199403) EN 7p A61K031-70  
 R: AT BE CH DE ES FR GB LI NL SE  
 DE 68912419 E 19940303 (199410) A61K031-70  
 CA 1327003 C 19940215 (199412) A61K031-70  
 JP 06023109 B2 19940330 (199416) 5p A61K031-70  
 ADT EP 348360 A EP 1989-830264 19890614; JP 02045425 A JP 1989-150354  
 19890613; US 4960759 A US 1989-367615 19890619; IT 1219667 B IT 1988-48118  
 19880621; EP 348360 B1 EP 1989-830264 19890614; DE 68912419 E DE  
 1989-612419 19890614, EP 1989-830264 19890614; CA 1327003 C CA 1989-600276  
 19890524; JP 06023109 B2 JP 1989-150354 19890613  
 FDT DE 68912419 E Based on EP 348360; JP 06023109 B2 Based on JP 02045425  
 PRAI IT 1988-48118 19880621  
 REP 3.Jnl.Ref; A3...9143; EP 178267; EP 216133; No-SR.Pub; WO 8903837  
 IC A61K031-70; C07H019-06  
 ICM A61K031-70  
 ICS A61K031-445; C07H019-06  
 ICA C07H019-067  
 AB EP 348360 A UPAB: 19930928  
**Uridine** is used for the manufacture of a medicament for  
 controlling the function of the dopaminergic system, and thus for treating  
 psychic disorders of schizophrenic and Parkinson's disease type. Tests  
 illustrate that an administration of **uridine** has a selective  
 effect on the protection of cholecystokinin in cerebral ageing; and that  
 it blocks the side-effects of neuroleptic drugs, esp. haloperidol.  
 0/0  
 FS CPI  
 FA AB; DCN  
 MC CPI: B04-B03A; **B12-C04; B12-C10; B12-G04**  
 ABEQ US 4960759 A UPAB: 19930928  
 New treatment of **Parkinson's disease** and disorders due to altered  
 functioning of cerebral dopaminergic system or altered modulation of  
 dopamine release in brain tissue, e.g. schizophrenia, esp. those due to  
 low level of cholecystokinin (CCK), comprises admin. of **uridine**  
 which increases CCK level.  
 USE - CCK is a natural hormonal peptide which modulates dopaminergic  
 receptor, but fails to enter CNS by systemic admin., but **uridine**  
 does enter and admin. increases CCK levels which fall on ageing, and  
 improves dopaminergic functions, while blocking side effects of  
 neuroleptics.  
 ABEQ EP 348360 B UPAB: 19940303  
 Use of **uridine** for the mfr. of a medicament for the treatment of  
 the Parkinson's disease.  
 Dwg.0/0

L98 ANSWER 7 OF 11 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD  
 AN 1989-150746 [20] WPIDS  
 CR 1989-150747 [20]; 1989-339766 [46]; 1993-045427 [05]; 1993-311619 [39];  
 1994-217794 [26]; 1995-006689 [01]; 1996-019901 [02]; 1996-087513 [09];  
 1997-065133 [06]; 1998-239258 [21]; 1998-376859 [32]

DNC C1989-066755

TI New **uridine**- and cytidine acyl derivs - used in treatment e.g. of hepatopathy, diabetes, heart disease, **cerebrovascular** disorders and **parkinson's** disease.

DC B03

IN BAMAT, M K; VON BORSTEL, R; VON BORSTEL, R W; VONBORSTEL, R W

PA (PRON-N) PRO-NEURON INC

CYC 23

PI WO 8903837 A 19890505 (198920)\* EN 69p  
 RW: AT BE CH DE FR GB IT LU NL SE  
 W: AU BR DK FI JP KR NO SU US  
 AU 8927899 A 19890523 (198939)  
 EP 339075 A 19891102 (198944) EN  
 R: AT BE CH DE FR GB IT LI LU NL SE  
 JP 02500372 W 19900208 (199012)  
 ZA 8900232 A 19900627 (199030)  
 EP 339075 B1 19930818 (199333) EN 39p C07H019-067  
 R: AT BE CH DE FR GB IT LI LU NL SE  
 DE 3883374 G 19930923 (199339) C07H019-067  
 CA 1321994 C 19930907 (199342) C07H019-067  
 EP 339075 A4 19900530 (199511)  
 JP 07228535 A 19950829 (199543) 22p A61K031-70  
 IL 88208 A 19961016 (199648) A61K031-70  
 US 5583117 A 19961210 (199704) 21p A61K031-70  
 JP 10001436 A 19980106 (199811) 25p A61K031-70  
 JP 2894610 B2 19990524 (199926) 31p C07H019-067

ADT WO 8903837 A WO 1988-US3823 19881027; EP 339075 A EP 1988-909932 19881027;  
 JP 02500372 W JP 1988-509176 19881027; ZA 8900232 A ZA 1988-232 19881027;  
 EP 339075 B1 EP 1988-909932 19881027, WO 1988-US3823 19881027; DE 3883374  
 G DE 1988-3883374 19881027, EP 1988-909932 19881027, WO 1988-US3823  
 19881027; CA 1321994 C CA 1988-581429 19881027; EP 339075 A4 EP  
 1988-909932 ; JP 07228535 A Div ex JP 1988-509176 19881027, JP  
 1994-303877 19881027; IL 88208 A IL 1988-88208 19881028; US 5583117 A Cont  
 of US 1987-115929 19871028, Div ex US 1991-737913 19910729, US 1993-140475  
 19931025; JP 10001436 A Div ex JP 1988-509176 19881027, JP 1997-36734  
 19881027; JP 2894610 B2 JP 1988-509176 19881027, WO 1988-US3823 19881027

FDT EP 339075 B1 Based on WO 8903837; DE 3883374 G Based on EP 339075, Based  
 on WO 8903837; JP 2894610 B2 Previous Publ. JP 02500372, Based on WO  
 8903837

PRAI US 1987-115929 19871028; US 1991-737913 19910729; US 1993-140475  
 19931025

REP 1.Jnl.Ref; EP 178267; EP 222192; EP 56265; JP 52023085; JP 55024150; JP  
 57023085; JP 58049315; US 3585188; US 3894000; US 3975367; US 3991045;  
 No-Citns.; JP 57091995

IC A61K031-70; C07D000-00; C07H019-06  
 ICM A61K031-70  
 ICS C07D000-00; C07H019-06

ICA C07H019-067

AB WO 8903837 A UPAB: 20000313

Acyl derivs. of **uridine** of formulae (I) and (II) and pharmaceutically acceptable salts are new In (I): R1-3 = H or acyl radical of a metabolite; and R4 = acyl radical of a metabolite. In (II): R1-3 = H or acyl of: (a) an unbranched 5-22C fatty acid; (b) an amino acid from Gly, Ala, Val, Leu, Ile, Tyr, Pro, L-hydroxyproline, Ser, Thr, Cys, Cys-Cys, Asp, Glu, Arg, Lys, His L-carnitine and Orn; (c) a 3-22C dicarboxylic acid; or (d) one or more of glycolic, pyruvic, lactic, enolpyruvic, lipoic, pantothenic, acetoacetic, p-aminobenzoic, beta-hydroxybutyric and orotic acids and creatine; provided that at least one of R1-3 is not H, and further that if any of R1-3 = H and if the remaining substituents are n-fatty acyl, then the n-fatty acyl contains 8-22.

Delivery of exogenous cytidine to animal tissue comprises admin. of an acyl deriv. of cytidine of formula (III), or salt: where R1-4 = H or acyl deriv. of a metabolite, provided at least one is not H.

USE/ADVANTAGE - Used for treating physiological or pathological conditions by supporting tissue metabolic functions, partic. in treatment of cardiac insufficiency and myocardial infarction, liver disease or

damage, muscle performance, lung disorders, diabetes, CNS disorders such as cerebrovascular disorders, Parkinson's disease and senile dementias, and to improve immune responses. The cpds. improve the bioavailability of **uridine** and cytidine by enhancing transport across the gastrointestinal tract and other biological membranes, and prevent their premature degradation. The acylated derivs. are effective when admin. p.o. Doses are e.g. 0.5-3.0 g (as nucleoside)/day. The **uridine** and cytidine derivs. may be coadmin.

Dwg.0/11

FS CPI

FA AB; DCN

MC CPI: B04-B03A; **B12-C04**; **B12-D02A**; B12-F01B; B12-G02;  
B12-G04A; B12-H05; B12-K06

ABEQ EP 339075 B UPAB: 19931119

An acyl derivative of **uridine** having the formula (II) wherein R1, R2, and R3 are the same or different and each is hydrogen or an acyl radical of (a) an unbranched fatty acid with 5 to 22 carbon atoms, (b) an amino acid selected from the group consisting of glycine, L-forms of alanine, valine, leucine, isoleucine, tyrosine, proline, hydroxyproline, serine, threonine, cystine, cysteine, aspartic acid, glutamic acid, arginine, lysine, histidine, carnitine, and ornithine, (c) a dicarboxylic acid of 3 to 22 carbon atoms, or (d) a carboxylic acid selected from one or more of the group consisting of glycolic acid, pyruvic acid, lactic acid, enolpyruvic acid, lipoic acid, pantothenic acid, acetoacetic acid, p-aminobenzoic acid, betahydroxybutyric acid, orotic acid, and creatine, provided that at least one of said substituents R1, R2 and R3 is not hydrogen, and further provided that if any of said substituents R1, R2 and R3 is hydrogen and if said remaining substituents are acyl radicals of a straight chain fatty acid, then said straight chain fatty acid has 8 to 22 carbon atoms, or a pharmaceutically acceptable salt thereof.

Dwg.0/11

ABEQ US 5583117 A UPAB: 19970122

Delivery of exogenous **uridine** to the tissue of animal, comprises administering to animal, an acyl deriv. of **uridine** of (I) or the pharmaceutically acceptable salt thereof. In (I), R is H or an acyl group derived from carboxylic acid selected from acetic acid, glycolic acid, pyruvic acid, lactic acid, enolpyruvic acid, aminoacid, fatty acid, lipoic acid, pantothenic acid, succinic acid, fumaric acid, adipic acid, acetoacetic acid, p-aminobenzoic acid, beta-hydroxybutyric acid, orotic acid, and creatine; provided that at least one R is not H.

Dwg.0/10

L98 ANSWER 8 OF 11 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1987-295462 [42] WPIDS

DNC C1987-125568

TI Depressants acting on **CNS** - contain N3-benzyl-**uridine** derivs. as active component.

DC B03

PA (NISR) NISSUI SEIYAKU KK

CYC 1

PI JP 62207218 A 19870911 (198742)\* 6p

JP 06021073 B2 19940323 (199415) 7p A61K031-70

ADT JP 62207218 A JP 1986-49250 19860306; JP 06021073 B2 JP 1986-49250 19860306

FDT JP 06021073 B2 Based on JP 62207218

PRAI JP 1986-49250 19860306

IC A61K031-70; C07H019-06

ICM A61K031-70

ICS C07H019-06

ICA C07H019-067

AB JP 62207218 A UPAB: 19930922

CNS depressants contg. a **uridine** deriv. of formula (I) as active component, (wherein R1 is H, halogen atom or lower alkyl; R2 is H or lower alkyl; R3, R4 and R5 are H or lower alkyl) is novel.

I may be prepd. from N-unsubst. **uridine** derivs. of formula (II) on reaction with a benzyl halide deriv. of formula (III) (wherein

Sugar means the sugar part of I; X is halogen atom). The reaction is carried out in an inert solvent, e.g. DMFA, acetone, in presence of a base, e.g. K<sub>2</sub>CO<sub>3</sub>, Na<sub>2</sub>CO<sub>3</sub>, at a temp. of 4-150 deg.C for period of 1-50 hrs.

USE/ADVANTAGE - I can be used as psychotropic agents, antianxiety agents, anti-epileptics or muscular relaxants in a form of oral preps, or parenteral preps, injection for lateral ventricle, at a dose of 25-50 mg/60 kg for an adult in oral admin. Also applicable to continuous sleep disorder or agrypnia at a dose of 50-60 mg/60 kg.

/3

FS CPI

FA AB; DCN

MC CPI: B04-B03A; **B12-C05**; **B12-C10**; **B12-D04**;

**B12-E02**

L98 ANSWER 9 OF 11 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1987-017819 [03] WPIDS

DNC C1987-007290

TI New phosphono methyl **uridine** cpds. - useful as agrochemicals and antitumour, antiviral and **psychotropic** agents.

DC B03 C01

PA (SUNR) SUNTORY LTD

CYC 1

PI JP 61275291 A 19861205 (198703)\* 14p

ADT JP 61275291 A JP 1985-114750 19850528

PRAI JP 1985-114750 19850528

IC A01N057-24; A61K031-70; C07H019-06

AB JP 61275291 A UPAB: 19930922

Phosphonomethyluridines of formula (I) and their salts are new. In (I), R<sub>1</sub> is H or aralkyl; R<sub>2</sub> and R<sub>3</sub> are each H or lower alkyl.

Prodn. of (I) comprises (1) reaction of an aldehyde (II) or its equiv. (III) with a dialkyl phosphite (IV) in the presence of a base and (2) conversion of the hydroxy gp. at position 1' of the sugar moiety into the corresp. activated thio ester, followed by reductive deprotection and opt. dealkylation. R<sub>4</sub> is a protecting gp. or aralkyl; R<sub>5</sub> is a protecting gp.; R<sub>5</sub> and R<sub>8</sub> each is lower alkyl.

USE - (I) are useful as antagonists against nucleic acid biosynthesis and may be used as antitumour agents, antiviral agents, psychotropic agents or agrochemicals (e.g. insecticides).

0/0

FS CPI

FA AB; DCN

MC CPI: B04-B03B; B12-A06; **B12-C10**; B12-G01; B12-G07; B12-N02;

C04-B03B; C12-A06; **C12-C10**; C12-G01; C12-G07; C12-N02

L98 ANSWER 10 OF 11 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1986-101874 [16] WPIDS

DNC C1986-043593

TI Use of **uridine** in preventing brain neuron activity **decay**  
- e.g. in senility, cerebral hypoglycaemia, hypoglycaemia and ischaemia.

DC B03

IN DELUCA, G; DISTAZIO, G; MATERAZZI, M; POLITI, V

PA (POLI-N) POLIFARMA SPA

CYC 4

PI EP 178267 A 19860416 (198616)\* EN 10p

R: DE FR GB

IT 1178044 B 19870903 (199035)

PRAI IT 1984-48983 19841009

REP 6.Jnl.Ref; A3...8838; FR 4260; No-SR.Pub

IC A61K031-70

AB EP 178267 A UPAB: 19930922

The use is claimed of **uridine** (I) for prodn. of a medication for counteracting decay in neurone functional activity in brain pathologies, partic. for treatment of cerebral hypoglycemia, hypoxemia, ischemia or senility. Compsn. comprising (I) are also claimed.

Admin. may be p.o. or parenterally. Pref. oral dose is 1-5g/day.

The effect of (I) on somatostatin levels in rat cerebral cortex and hippocampus was investigated following insulin-induced hypoglycemia, since somatostatin levels are reduced in hypoglycemia as well as in the brains of elderly persons. In rats given 15 mg/kg (I), somatostatin levels were normalised in the hippocampus and were even increased in the motor cortex, c.f. a 50% reduction in absence of (I).

0/0

FS CPI

FA AB

MC CPI: B04-B03A; **B12-C10**; B12-G04

L98 ANSWER 11 OF 11 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1985-213740 [35] WPIDS

DNC C1985-092992

TI **Sleep** accelerator - contg. **uridine** as active component.

DC B03

PA (KOMO-I) KOMODA Y

CYC 1

PI JP 60136515 A 19850720 (198535)\* 3p

ADT JP 60136515 A JP 1983-243483 19831223

PRAI JP 1983-243483 19831223

IC A61K031-70; C07H019-06

AB JP 60136515 A UPAB: 19930925

This sleep accelerator is discovered from low molecular fraction of extract from vigilant rat brain stem, and the active ingredient to accelerate both slow wave sleep and paradoxical sleep is identified as **uridine**. **Uridine** is obtd. by hydrolysis of ribonucleic acid, dephosphorisation of uridylic acid, chemical synthesis and dehydration of 2,6-diketopyrimidine N-2,3,5-tribenzoyl ribofuranoside.

Common dose is 1-100 ng/kg, as **uridine** is water soluble, may be prepd. as injections, and also tablets, granules, and parenteral drugs. Assay of sleep accelerating effect by **uridine** is proceeded by using BDF1 mice (female) and Sprague - Dawley rat (male), **uridine** saline soln. is administered into abdominal (mice), and diacele by cannula (rat), both slow wase sleep and paradoxical sleep are significantly accelerated.

0/0

FS CPI

FA AB

MC CPI: B04-B03; **B12-C07**; **B12-C08**